

# EXHIBIT 12

**Analysis of Infringement of U.S. Patent No. 7,216,301 by Microchip Technology Incorporated**

Plaintiffs Caddo Systems, Inc. and 511 Technologies, Inc. ("Caddo"), provide this final and exemplary infringement analysis with respect to infringement of U.S. Patent No. 7,216,301, entitled "ACTIVE PATH MENU NAVIGATION SYSTEM" (the "'301 patent") by Microchip Technology Incorporated ("Microchip"). The following chart illustrates an exemplary analysis regarding infringement by Microchip's products and services ("'301 Accused Instrumentalities"):

- (i) web pages and content, including user interfaces such as a hierarchical information structure, to be interactively presented in browsers, including, without limitation, the web pages and content accessible via <https://www.microchip.com/> (as shown below) including [www.microchipdirect.com](http://www.microchipdirect.com) and maintained on servers located in and/or accessible from the United States under the control of Defendant that allow navigating a multi-level hierarchical information structure, where each level in the information structure contains plural items, each item being at least one of a function, a pointer to a location, and a pointer to another level;
- (ii) software, including, without limitation, software that allows web pages and content to be interactively presented in and/or served to browsers to facilitate navigating within a multi-level hierarchical information structure, where each level in the information structure contains plural items, each item being at least one of a function, a pointer to a location, and a pointer to another level; and
- (iii) computer equipment, including, without limitation, computer equipment that stores, serves, hosts, supports, and/or runs any of the foregoing or that allows navigating within a multi-level hierarchical information structure, where each level in the information structure contains plural items, each item being at least one of a function, a pointer to a location, and a pointer to another level, and any products, devices, systems, and/or components of systems with the same or substantially the same technical features and/or functionalities.

The analysis set forth below is based largely upon information from publicly available resources regarding the Accused Instrumentalities and Microchip's limited discovery production, as discovery in this matter has not yet been completed.

Unless otherwise noted, Caddo contends that Microchip directly infringes the '301 patent in violation of 35 U.S.C. § 271(a) by making, using, and/or selling, and/or offering to sell in the United States, and/or importing into the United States, without authority or license, the Accused Instrumentalities.

The following exemplary analysis demonstrates that infringement. Unless otherwise noted, Caddo further contends that the evidence below supports a finding of indirect infringement under 35 U.S.C. § 271(b) and 35 U.S.C. § 271(c) in conjunction with other evidence of liability.

Unless otherwise noted, Caddo believes and contends that each element of each claim asserted herein is literally met through Microchip's provision or importation of the Accused Instrumentalities. However, to the extent that Microchip attempts to allege that any asserted claim element is not literally met, Caddo believes and contends that such elements are met under the doctrine of equivalents. More specifically, in its investigation and analysis of the Accused Instrumentalities, Caddo did not identify any substantial differences between the elements of the patent claims and the corresponding features of the Accused Instrumentalities, as set forth herein. In each instance, the identified feature of the Accused Instrumentalities performs at least substantially the same function in substantially the same way to achieve substantially the same result as the corresponding claim element.

Caddo reserves the right to supplement and/or amend the positions taken in this infringement analysis, including with respect to literal infringement and infringement under the doctrine of equivalents, if and when warranted by further information obtained by Caddo, including but not limited to information adduced through information exchanges between the parties, fact discovery, expert discovery, and/or further analysis.

Plaintiffs' Final Infringement Contentions  
Civil Action No.: 6:20-cv-245  
Claim Chart re: U.S. Patent No. 7,216,301

<b>U.S. Patent No. 7,216,301 Claims</b>	<b>Infringement by the Microchip '301 Accused Instrumentalities</b>
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<p>1. A method for navigating within a multi-level hierarchical information structure where each level in the information structure contains plural items, each said item being at least one of a function, a pointer to a location, and a pointer to another level, said method comprising the steps of:</p>	<p>The '301 Accused Instrumentalities ("Accused Instrumentalities") include:</p> <ul style="list-style-type: none"> <li>(iv) web pages and content, including user interfaces such as a hierarchical information structure, to be interactively presented in browsers, including, without limitation, the web pages and content accessible via <a href="https://www.microchip.com/">https://www.microchip.com/</a> including <a href="http://www.microchipdirect.com">www.microchipdirect.com</a> and maintained on servers located in and/or accessible from the United States under the control of Defendant that allow navigating a multi-level hierarchical information structure, where each level in the information structure contains plural items, each item being at least one of a function, a pointer to a location, and a pointer to another level;</li> <li>(v) software, including, without limitation, software that allows web pages and content to be interactively presented in and/or served to browsers to facilitate navigating within a multi-level hierarchical information structure, where each level in the information structure contains plural items, each item being at least one of a function, a pointer to a location, and a pointer to another level; and</li> <li>(vi) computer equipment, including, without limitation, computer equipment that stores, serves, hosts, supports, and/or runs any of the foregoing or that allows navigating within a multi-level hierarchical information structure, where each level in the information structure contains plural items, each item being at least one of a function, a pointer to a location, and a pointer to another level, and any products, devices, systems, and/or components of systems with the same or substantially the same technical features and/or functionalities.</li> </ul> <p><b><u>Direct Infringement</u></b>        Microchip has directly infringed claims 1-5 and 9 of the '301 patent under 35 U.S.C. § 271(a) each time that it makes, uses, tests, and/or hosts in the United States the Accused Instrumentalities, or products, devices, systems, and/or components of systems, that practice the claimed methods described hereinbelow. Microchip also directly infringes each of the Asserted Claims under 35 U.S.C. § 271(a) each time that it imports the Accused Instrumentalities into the United States.</p> <p><b><u>Indirect Infringement</u></b>        Microchip has induced and continues to induce infringement by others of claims 1-5 and 9 of the '301 patent under 35 U.S.C. § 271(b) by (a) providing the Accused Instrumentalities to third parties and intending them to use the Accused Instrumentalities; (b) advertising these Accused Instrumentalities through Microchip's own and through third party websites; (c) encouraging customers and other third parties to communicate directly with Microchip about the Accused Instrumentalities for purposes of technical assistance and repair as well as sales and marketing; (d) providing instructions as to how to use the Accused Instrumentalities in an infringing manner.</p>
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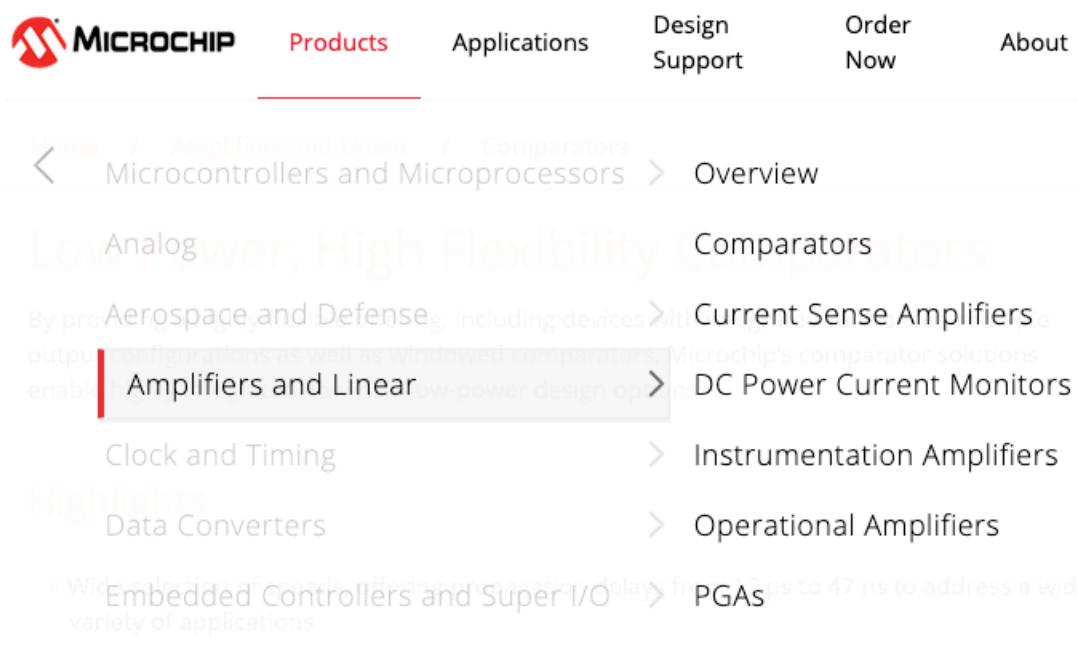
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Microchip has contributed to and continues to contribute to infringement by others of claims 1-5 and 9 of the '301 patent under 35 U.S.C. § 271(c) by providing the Accused Instrumentalities, including web pages and content, user interfaces (e.g., hierarchical collapsing menu structure, hierarchical information structure, information structure, and/or hierarchical menu structure), software, and/or computer equipment as identified above, in the United States without authority, Microchip contributes to the direct infringement of third-parties including end users of the Accused Instrumentalities.

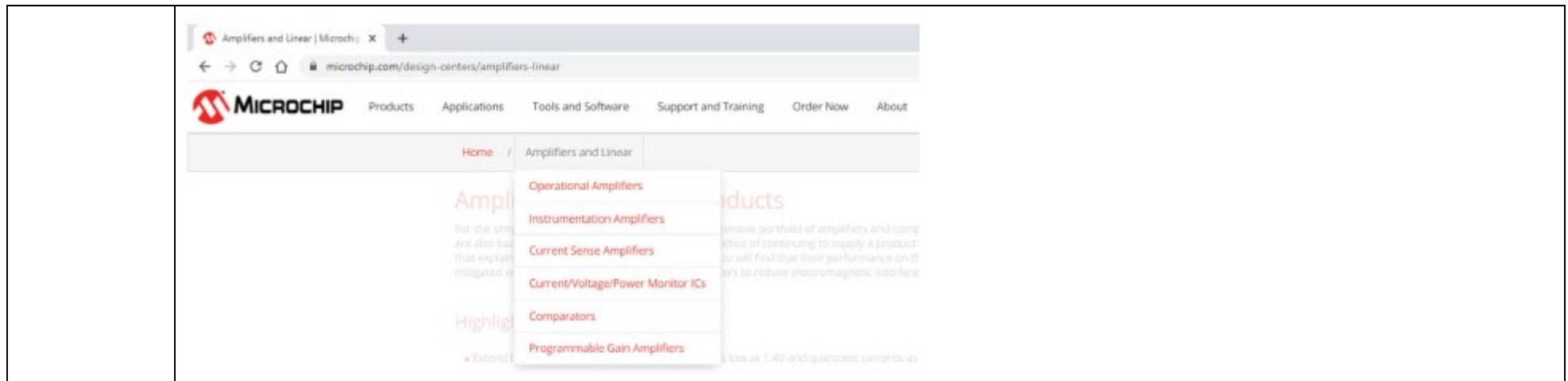
To the extent that the preamble of Claim 1 is a limitation, the '301 Accused Instrumentalities provide, or support the provision of, a method as described below.

The '301 Accused Instrumentalities provide a method for navigating within a multi-level hierarchical information structure where each level in the information structure contains plural items, each said item being at least one of a function, a pointer to a location, and a pointer to another level (e.g., the '301 Accused Instrumentalities provide a method for navigating within a multi-level hierarchical collapsing menu structure where each level in the information structure contains plural items, each said item being at least one of a function, a pointer to a location, and a pointer to another level (e.g., "Products" includes "Amplifiers and Linear," which includes "Operational Amplifiers," "Instrumentation Amplifiers," "Current Sense Amplifiers," "Comparators," "Programmable Gain Amplifiers," and "DC Power Current Monitors")) as shown below:

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 Claim Chart re: U.S. Patent No. 7,216,301

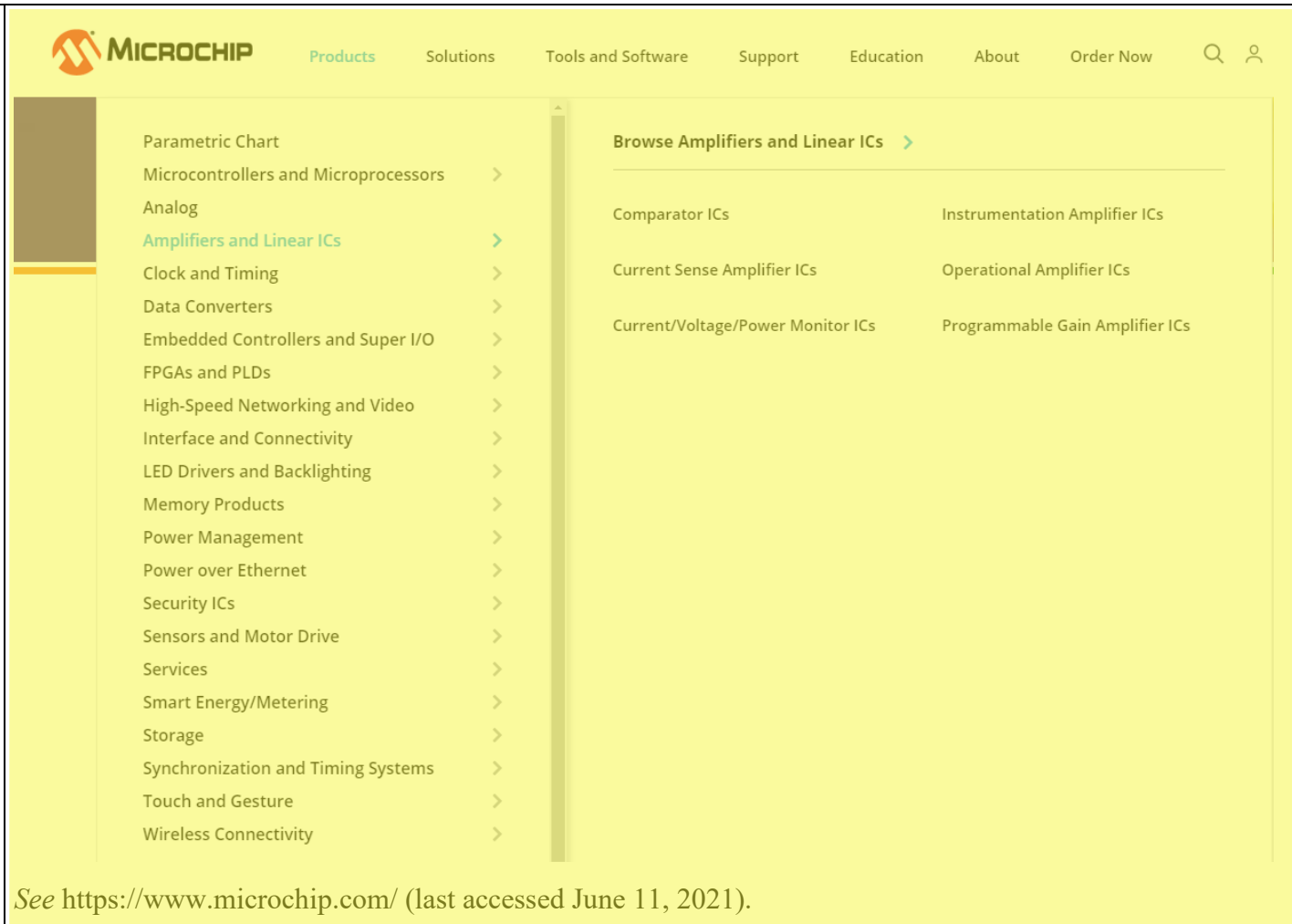
	 <p>See, e.g., <a href="https://www.microchip.com/design-centers/amplifiers-linear/comparators">https://www.microchip.com/design-centers/amplifiers-linear/comparators</a> (last visited Feb. 10, 2020).</p> <p>See also MCHP-CADD0_0000935:</p>
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Civil Action No.: 6:20-cv-245  
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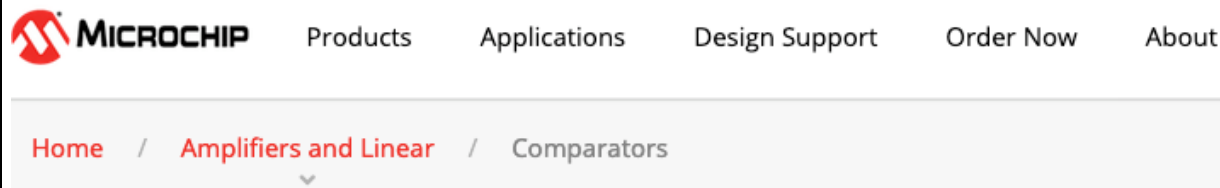
Plaintiffs' Final Infringement Contentions  
 Civil Action No.: 6:20-cv-245  
 Claim Chart re: U.S. Patent No. 7,216,301



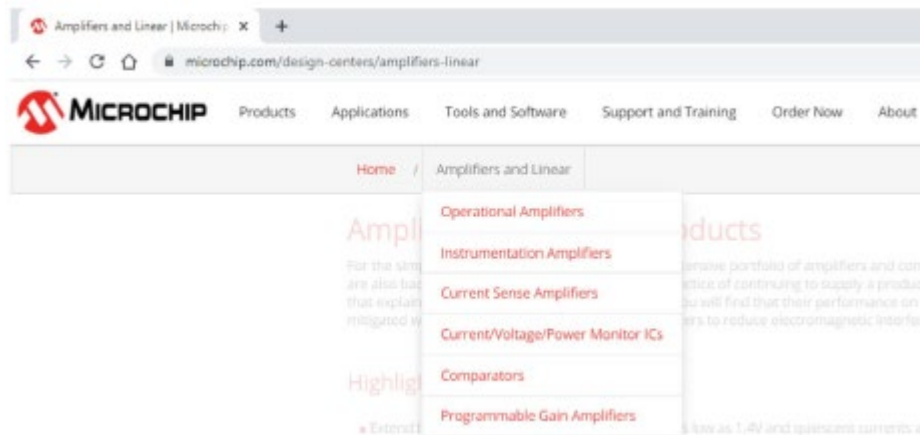
providing a graphical user menu system displaying the items of a given level of the hierarchical information structure and enabling selection thereof; and

The '301 Accused Instrumentalities provide a graphical user menu system displaying the items of a given level of the hierarchical information structure and enabling selection thereof.

For example, the '301 Accused Instrumentalities provide a graphical user menu system displaying the items of a given level of the hierarchical information structure and enabling selection thereof (*e.g.*, “Products” displays and enables selection of items of a given level, such as “Amplifiers and Linear” and items within that same level).



*See, e.g.*, <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).



*See* MCHP-CADD0\_0000935.

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319 <div class="breadcrumbs-open-btn"><span>Menu</span></div>
320 <div class="breadcrumbs">
321   <div class="breadcrumbs-top-bar">
322     <span class="breadcrumbs-close-btn">x</span>
323   </div>
324   <div class="crumbs-wrapper">
325     <div class="crumb">
326       <div class="crumb-top">
327         <a href="/">Home</a>
328       </div>
329     </div>
330     <span class="breadcrumbs-separator">/</span>
331     <div class="crumb has-menu">
332       <div class="crumb-top current">
333         <a href="/design-centers/amplifiers-linear">Amplifiers
334         and Linear</a>
335       <div class="open-menu"><i class="fa fa-angle-down"
336       ></i></div>
337     </div>
338     <ul>
339       <li class="">
340         <a class="" href="/design-centers/amplifiers-linear/operational-ampli-
341         fiers">Operational Amplifiers</a>
342       </li>
343       <li class="">
344         <a class="" href="/design-centers/amplifiers-linear/instrumentation-a-
345         mplifiers">Instrumentation Amplifiers</a>
346       </li>
347       <li class="">
348         <a class="" href="/design-centers/amplifiers-linear/current-sense-amp-
349         lifiers">Current Sense Amplifiers</a>
350       </li>
351       <li class="">

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349         <a class=" " href="/design-centers/amplifiers-linear/current-voltage-p
ower-monitors">Current/Voltage/Power Monitor ICs</a>
350     </li>
351     <li class="">
352         <a class=" " href="/design-centers/amplifiers-linear/comparators">Comp
arators</a>
353     </li>
354     <li class="">
355         <a class=" " href="/design-centers/amplifiers-linear/programmable-gain
-amplifiers">Programmable Gain Amplifiers</a>
356     </li>
357         </ul>
358     </div>
359
360 </div>
361 </div>
362 <div class="breadcrumbs-curtain"></div>
363
364 <div class="row" data-sf-element="Row">

```

See MCHP-CADDO\_0001040-41.

As another example, the '301 Accused Instrumentalities provide a graphical user menu system displaying the items of a given level of the hierarchical information structure and enabling selection thereof (e.g., “Products” displays and enables selection of items of a given level, such as “Microcontrollers and Microprocessors” and items within that same level “Analog,” “Amplifiers and Linear ICs,” “Clock and Timing” “Data Converters,” etc.) as shown below:

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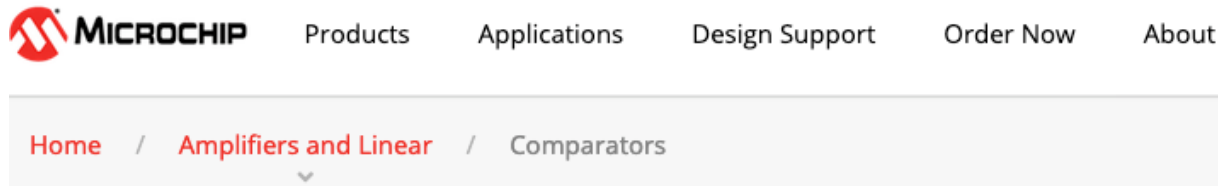


See <https://www.microchip.com/> (last accessed June 8, 2021).

dynamically constructing an Active Path as a sequence of active links as items are selected using the graphical user menu system, with one said active link corresponding to each of the items selected, said active links providing direct access to one of a function, corresponding level and menu item without the need to navigate using said

The '301 Accused Instrumentalities dynamically construct an Active Path, which has been construed by this Court (Dkt. 34) as a sequence of links dynamically created as a menu item is navigated, as a sequence of active links as items are selected using the graphical user menu system, with one said active link corresponding to each of the items selected, said active links providing direct access to one of a function, corresponding level and menu item without the need to navigate using said graphical user menu system.

For example, the '301 Accused Instrumentalities dynamically construct a sequence of links dynamically created as a menu item is navigated, as the sequence of active links as items are selected (*e.g.*, the '301 Accused Instrumentalities dynamically construct a sequence of links dynamically created (*e.g.*, “Amplifiers and Linear—Comparators”) as the sequence of active links as items are selected (*e.g.*, as “Amplifiers and Linear” and “Comparators” are selected)), with one said active link corresponding to each of the items selected. Said active links provide direct access to one of a function, corresponding level and menu item without the need to navigate using said graphical user menu system (*e.g.*, the '301 Accused Instrumentalities' sequence of links dynamically created as a menu item is navigated “Amplifiers and Linear—Comparators” corresponds to each of the items sequentially selected, including “Amplifiers and Linear” and “Comparators”).

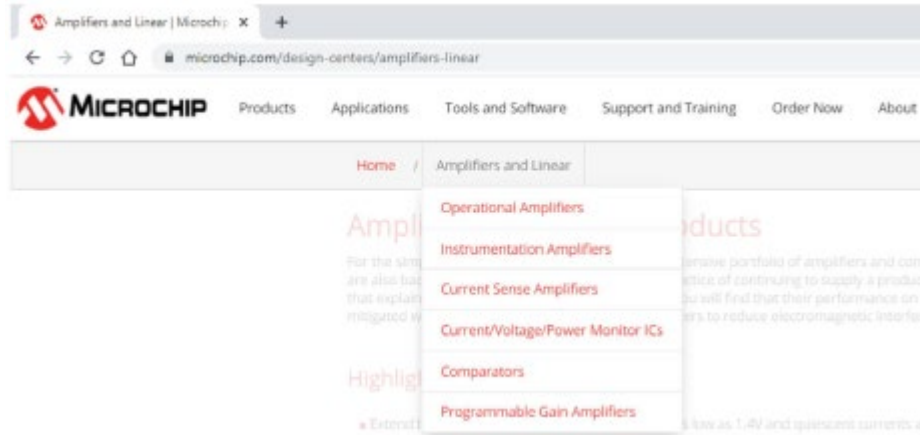


*See, e.g.*, <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).

*See also* MCHP-CADDO\_0000935:

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graphical user  
menu system;



As another example, the '301 Accused Instrumentalities dynamically construct a sequence of links dynamically created as a menu item is navigated, as the sequence of active links as items are selected (e.g., links in this path “Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs / AVR® DA,” as a sequence of hierarchical active links as items are selected (e.g., as each hierarchical active link in the path “Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs / AVR® DA” is selected, and the active links correspond to each of the items selected using the graphical user menu system) without the need to navigate using said graphical user menu system as shown below:

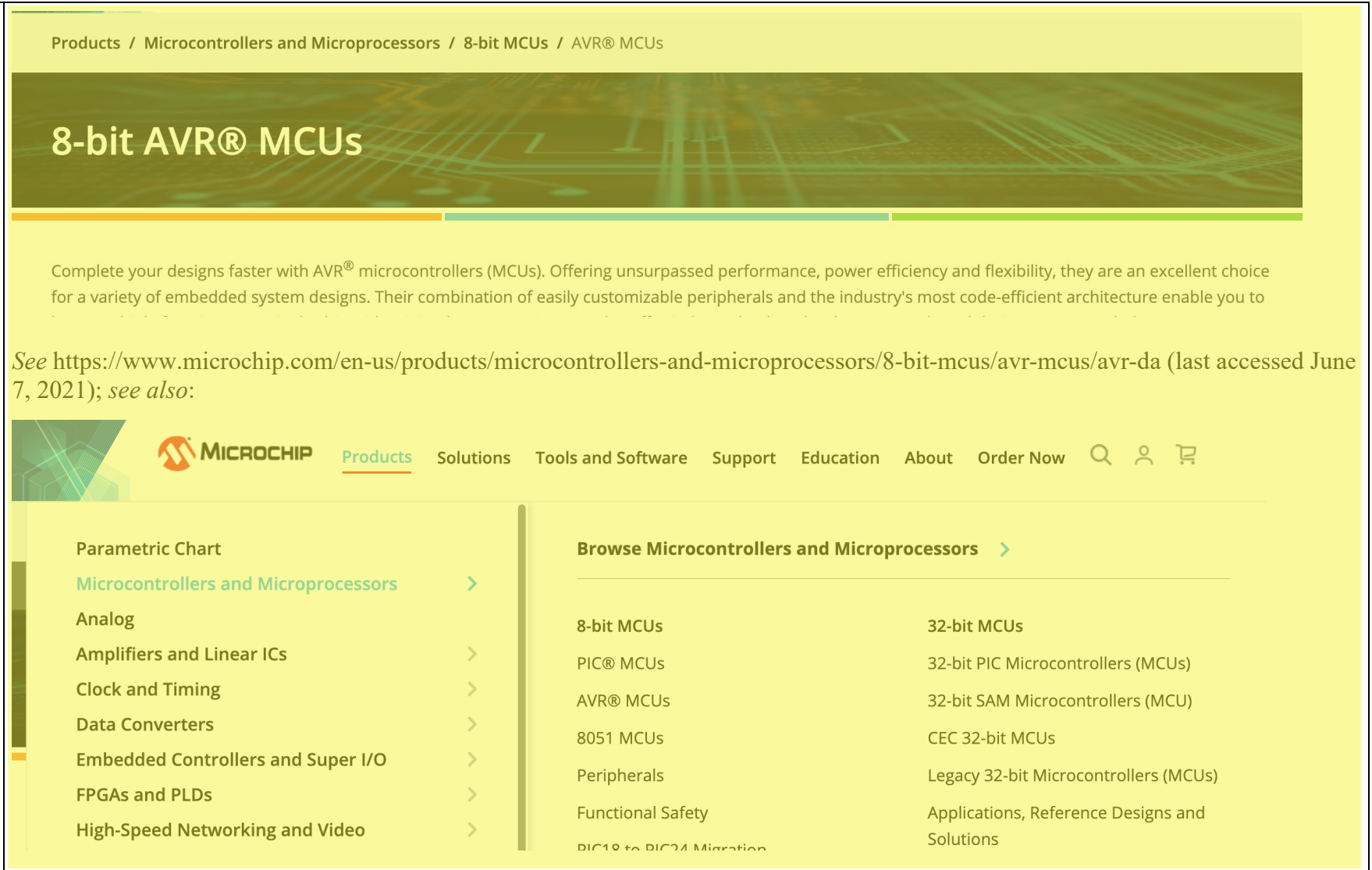


Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs

## 8-bit AVR® MCUs

Complete your designs faster with AVR® microcontrollers (MCUs). Offering unsurpassed performance, power efficiency and flexibility, they are an excellent choice for a variety of embedded system designs. Their combination of easily customizable peripherals and the industry's most code-efficient architecture enable you to

See <https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors/8-bit-mcus/avr-mcus/avr-da> (last accessed June 7, 2021); see also:



**Parametric Chart**

- Microcontrollers and Microprocessors** >
- Analog >
- Amplifiers and Linear ICs >
- Clock and Timing >
- Data Converters >
- Embedded Controllers and Super I/O >
- FPGAs and PLDs >
- High-Speed Networking and Video >

**Browse Microcontrollers and Microprocessors** >

8-bit MCUs	32-bit MCUs
PIC® MCUs	32-bit PIC Microcontrollers (MCUs)
AVR® MCUs	32-bit SAM Microcontrollers (MCU)
8051 MCUs	CEC 32-bit MCUs
Peripherals	Legacy 32-bit Microcontrollers (MCUs)
Functional Safety	Applications, Reference Designs and Solutions
PIC18 to PIC24 Migration	



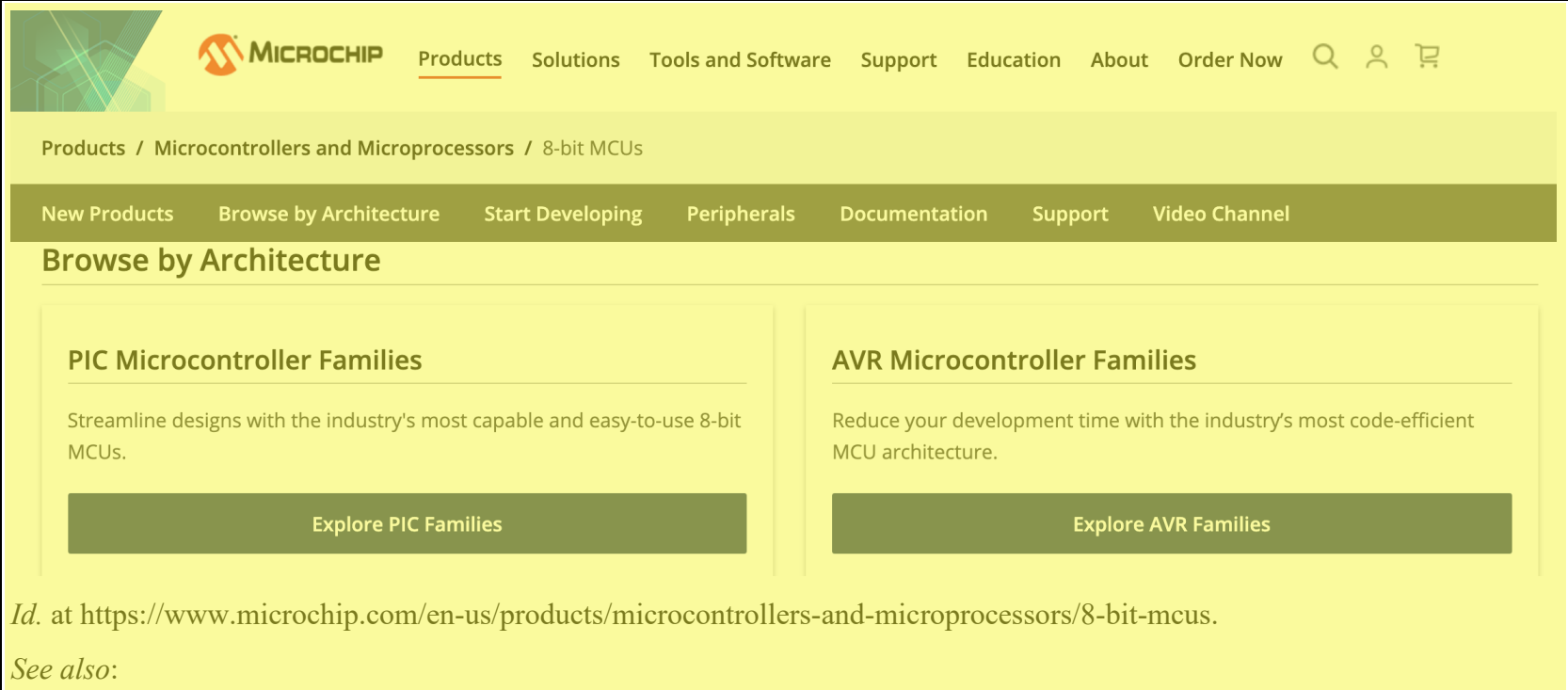
*Id.* at <https://www.microchip.com/>.

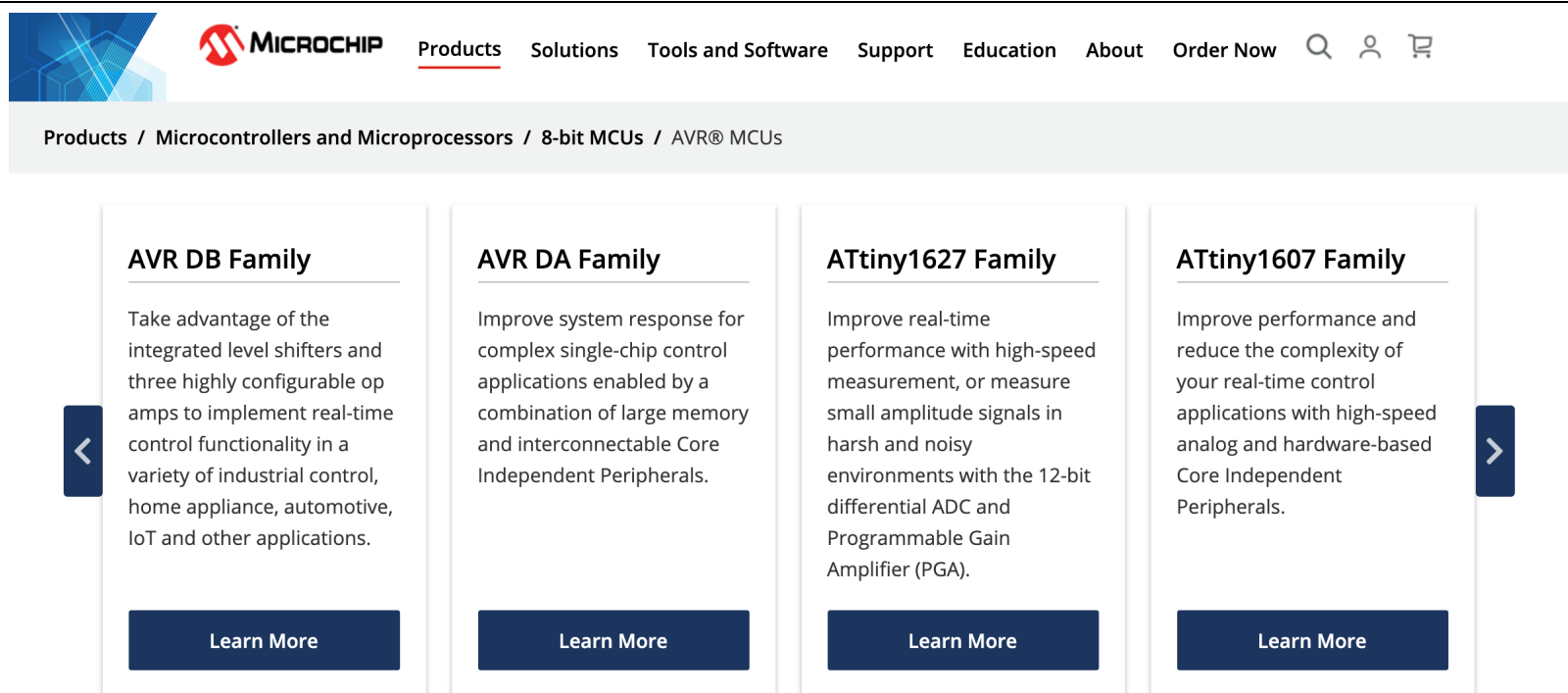
*See also:*



*Id.* at <https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors>.

*See also:*





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Take advantage of the integrated level shifters and three highly configurable op amps to implement real-time control functionality in a variety of industrial control, home appliance, automotive, IoT and other applications.

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### AVR DA Family

Improve system response for complex single-chip control applications enabled by a combination of large memory and interconnectable Core Independent Peripherals.

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### ATtiny1627 Family

Improve real-time performance with high-speed measurement, or measure small amplitude signals in harsh and noisy environments with the 12-bit differential ADC and Programmable Gain Amplifier (PGA).

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### ATtiny1607 Family

Improve performance and reduce the complexity of your real-time control applications with high-speed analog and hardware-based Core Independent Peripherals.

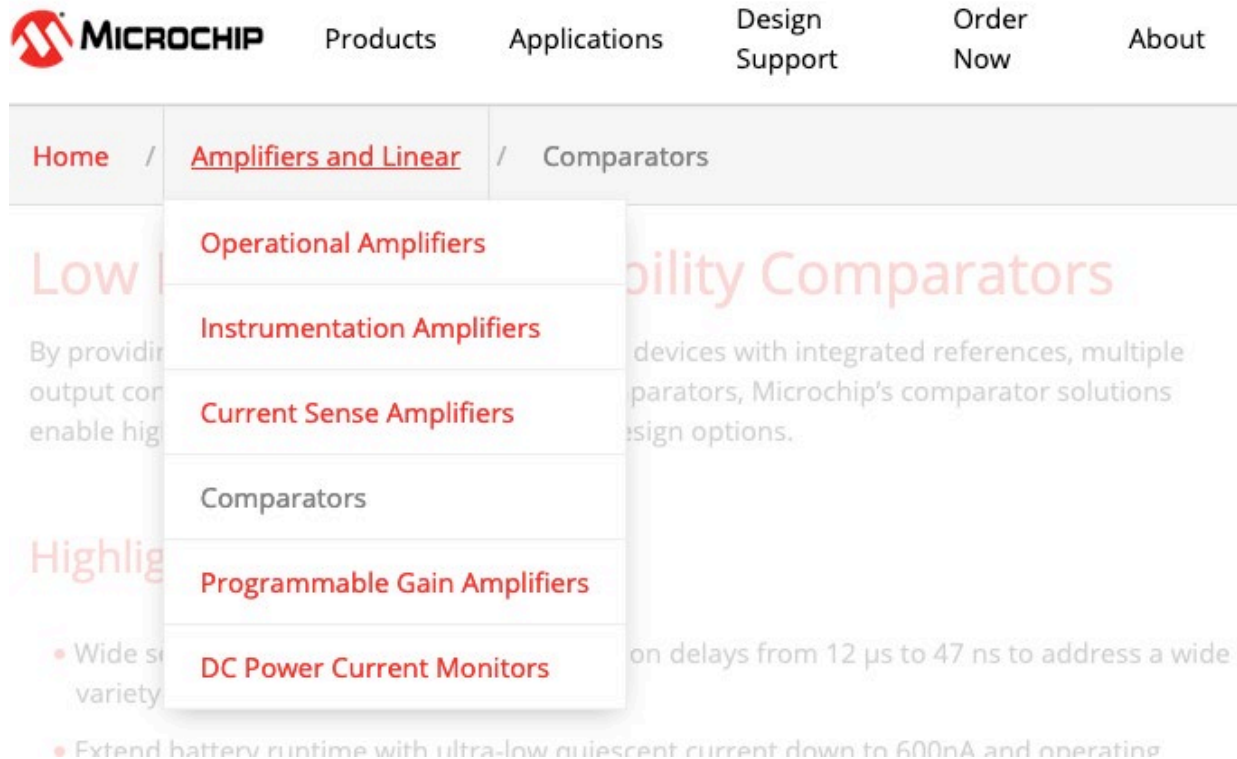
Learn More

*Id.* at <https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors/8-bit-mcus/avr-mcus> (last accessed Jun. 8, 2021).

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<p>each said active link enabling the user to directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items without affecting the Active Path.</p>	<p>Each active link of the '301 Accused Instrumentalities enables the user to directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items without affecting the Active Path, which has been construed by this Court (Dkt. 34) as a sequence of links dynamically created as a menu item is navigated.</p> <p>For example, each active link in the '301 Accused Instrumentalities enables the user to directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items without affecting the sequence of links dynamically created as a menu item is navigated (<i>e.g.</i>, the '301 Accused Instrumentalities enable the user to directly browse all items under “Amplifiers and Linear” such as “Operational Amplifiers,” “Instrumentation Amplifiers,” “Current Sense Amplifiers,” “Comparators,” “Programmable Gain Amplifiers,” and “DC Power Current Monitors” without affecting the a sequence of links dynamically created as a menu item is navigated “Amplifiers and Linear—Comparators”) as shown below:</p>
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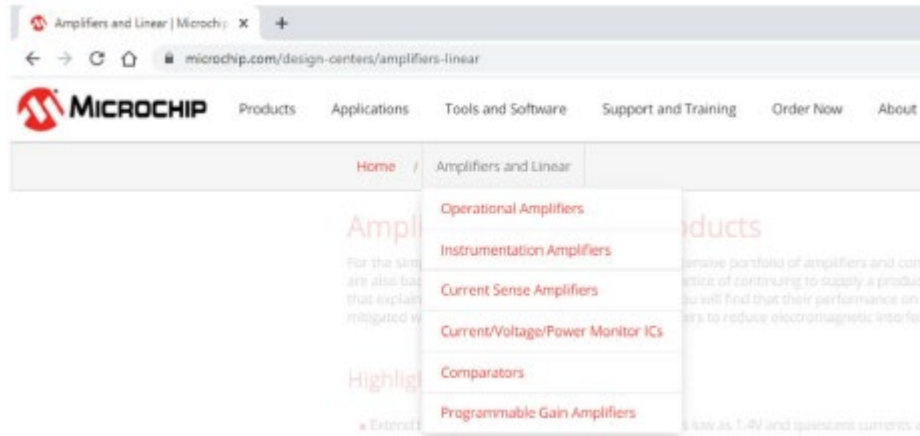
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See, e.g., <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).

See also MCHP-CADDO\_0000935:

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As another example, each active link in the '301 Accused Instrumentalities enables the user to directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items without affecting the sequence of links dynamically created as a menu item is navigated (*e.g.*, the '301 Accused Instrumentalities enable the user to directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items in the path “Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs” without affecting the a sequence of links dynamically created as a menu item is navigated “Products—Microcontrollers and Microprocessors”) as shown below:

Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs

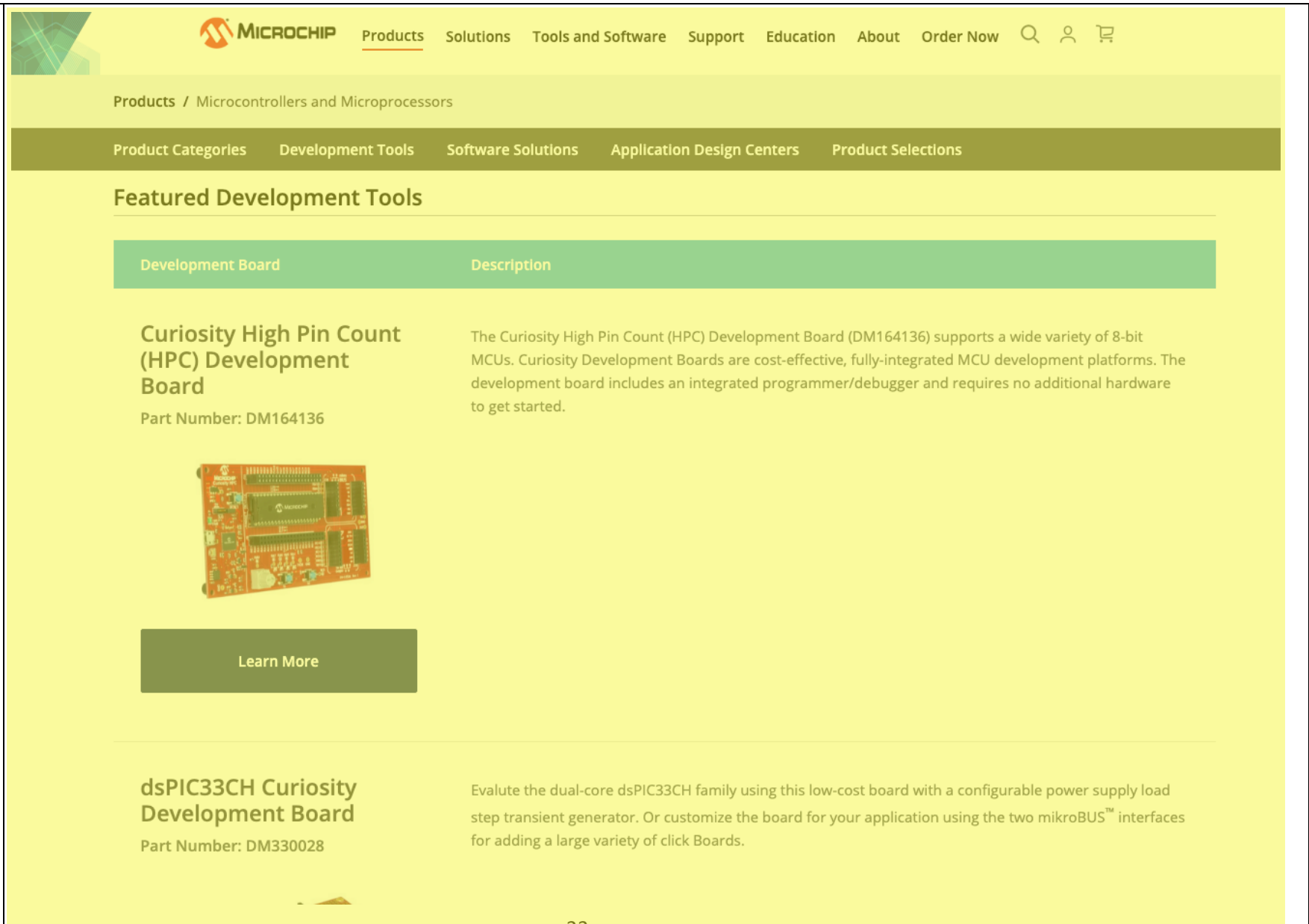
## 8-bit AVR® MCUs

Complete your designs faster with AVR® microcontrollers (MCUs). Offering unsurpassed performance, power efficiency and flexibility, they are an excellent choice for a variety of embedded system designs. Their combination of easily customizable peripherals and the industry's most code-efficient architecture enable you to

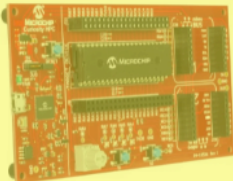

See <https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors/8-bit-mcus/avr-mcus/avr-da> (last visited Jun. 7, 2021).

For example, the user can directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items in the path “Products / Microcontrollers and Microprocessors” such as “Product Categories,” “Development Tools,” “Software Solutions,” “Application Design Centers,” and “Product Selections” without affecting the path “Products / Microcontrollers and Microprocessors” (e.g., the user can browse items under “Product Categories,” “Development Tools,” “Software Solutions,” “Application Design Centers,” or “Product Selections” without affecting the path “Products / Microcontrollers and Microprocessors.”).

As another example, each active link in the '301 Accused Instrumentalities enable the user to directly browse all items on any given level of the hierarchical information structure (e.g., all items under “Products / Microcontrollers and Microprocessors”) including all hierarchically subordinate items (e.g., browsing “Development tools” allows browsing of subordinate items such as products associated with “Part Number: DM164136” or “Part Number: DM330028”) without affecting the sequence of links dynamically created as a menu item is navigated as shown below:



The screenshot displays the Microchip website's 'Products' section, specifically focusing on 'Microcontrollers and Microprocessors'. The navigation bar includes links for Products, Solutions, Tools and Software, Support, Education, About, and Order Now, along with search, user, and shopping cart icons. Below the navigation bar, a breadcrumb trail reads 'Products / Microcontrollers and Microprocessors'. A secondary navigation bar lists 'Product Categories', 'Development Tools', 'Software Solutions', 'Application Design Centers', and 'Product Selections'. The main content area is titled 'Featured Development Tools' and contains two featured products:

Development Board	Description
<p><b>Curiosity High Pin Count (HPC) Development Board</b></p> <p>Part Number: DM164136</p>  <p><a href="#">Learn More</a></p>	<p>The Curiosity High Pin Count (HPC) Development Board (DM164136) supports a wide variety of 8-bit MCUs. Curiosity Development Boards are cost-effective, fully-integrated MCU development platforms. The development board includes an integrated programmer/debugger and requires no additional hardware to get started.</p>
<p><b>dsPIC33CH Curiosity Development Board</b></p> <p>Part Number: DM330028</p> 	<p>Evaluate the dual-core dsPIC33CH family using this low-cost board with a configurable power supply load step transient generator. Or customize the board for your application using the two mikroBUS™ interfaces for adding a large variety of click Boards.</p>



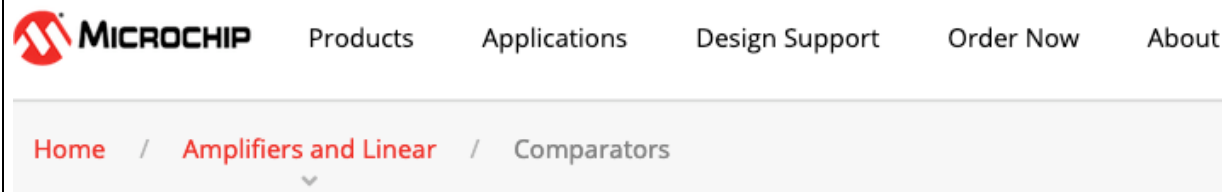
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	<i>See</i> <a href="https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors#Development%20Tools">https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors#Development%20Tools</a> (last accessed Jun. 8, 2021).
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2. The method for navigating according to claim 1, further comprising: providing pre-defined short-cuts enabling direct access to a given item; and

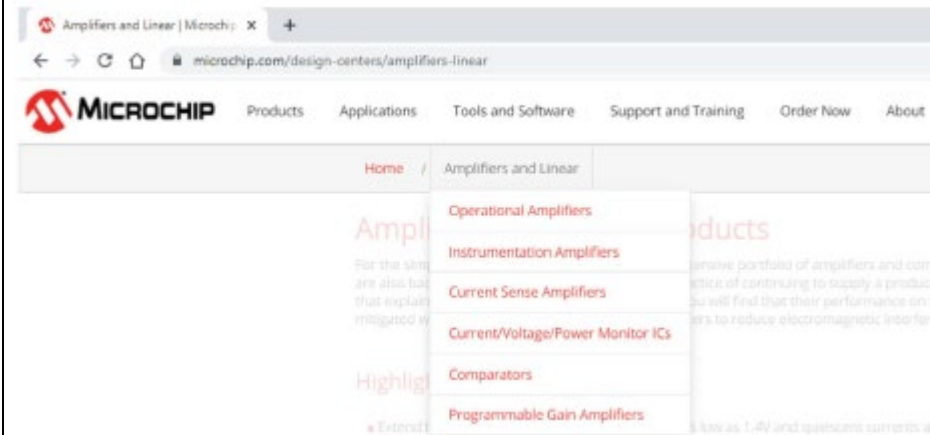
The '301 Accused Instrumentalities provide pre-defined short-cuts enabling direct access to a given item.

For example, the '301 Accused Instrumentalities provide pre-defined short-cuts enabling direct access to a given item (*e.g.*, the '301 Accused Instrumentalities provide pre-defined shortcuts, such as “Amplifiers and Linear” or “Comparators” in the collapsing menu, enabling direct access to a given menu item).



*See, e.g.*, <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).

*See also* MCHP-CADD0\_0000935:



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319 <div class="breadcrumbs-open-btn"><span>Menu</span></div>
320 <div class="breadcrumbs">
321   <div class="breadcrumbs-top-bar">
322     <span class="breadcrumbs-close-btn">x</span>
323   </div>
324   <div class="crumbs-wrapper">
325     <div class="crumb">
326       <div class="crumb-top">
327         <a href="/">Home</a>
328       </div>
329     </div>
330     <span class="breadcrumbs-separator">/</span>
331     <div class="crumb has-menu">
332       <div class="crumb-top current">
333         <a href="/design-centers/amplifiers-linear">Amplifiers
334         and Linear</a>
335       <div class="open-menu"><i class="fa fa-angle-down"
336       ></i></div>
337     </div>
338     <ul>
339       <li class="">
340         <a class="" href="/design-centers/amplifiers-linear/operational-ampli-
341         fiers">Operational Amplifiers</a>
342       </li>
343       <li class="">
344         <a class="" href="/design-centers/amplifiers-linear/instrumentation-a-
345         mplifiers">Instrumentation Amplifiers</a>
346       </li>
347       <li class="">
348         <a class="" href="/design-centers/amplifiers-linear/current-sense-amp-
349         lifiers">Current Sense Amplifiers</a>
350       </li>
351       <li class="">

```


```

349         <a class=" " href="/design-centers/amplifiers-linear/current-voltage-p
ower-monitors">Current/Voltage/Power Monitor ICs</a>
350     </li>
351     <li class="">
352         <a class=" " href="/design-centers/amplifiers-linear/comparators">Comp
arators</a>
353     </li>
354     <li class="">
355         <a class=" " href="/design-centers/amplifiers-linear/programmable-gain
-amplifiers">Programmable Gain Amplifiers</a>
356     </li>
357         </ul>
358     </div>
359
360 </div>
361 </div>
362 <div class="breadcrumbs-curtain"></div>
363
364 <div class="row" data-sf-element="Row">




```

See MCHP-CADDO\_0001040-41.

For example, the '301 Accused Instrumentalities provide pre-defined short-cuts enabling direct access to a given menu item (e.g., the '301 Accused Instrumentalities provide pre-defined shortcuts, such as “AVR® MCUs” and “AVR® DA,” or “New Products,” that enable direct access to those items), as shown below:



[Products](#)[Solutions](#)[Tools and Software](#)[Support](#)[Education](#)[About](#)[Order Now](#)



Parametric Chart

Microcontrollers and Microprocessors >

Analog

Amplifiers and Linear ICs >

Clock and Timing >

Data Converters >

Embedded Controllers and Super I/O >

FPGAs and PLDs >

High-Speed Networking and Video >

Browse Microcontrollers and Microprocessors >

8-bit MCUs

PIC® MCUs

AVR® MCUs

8051 MCUs

Peripherals

Functional Safety

32-bit MCUs

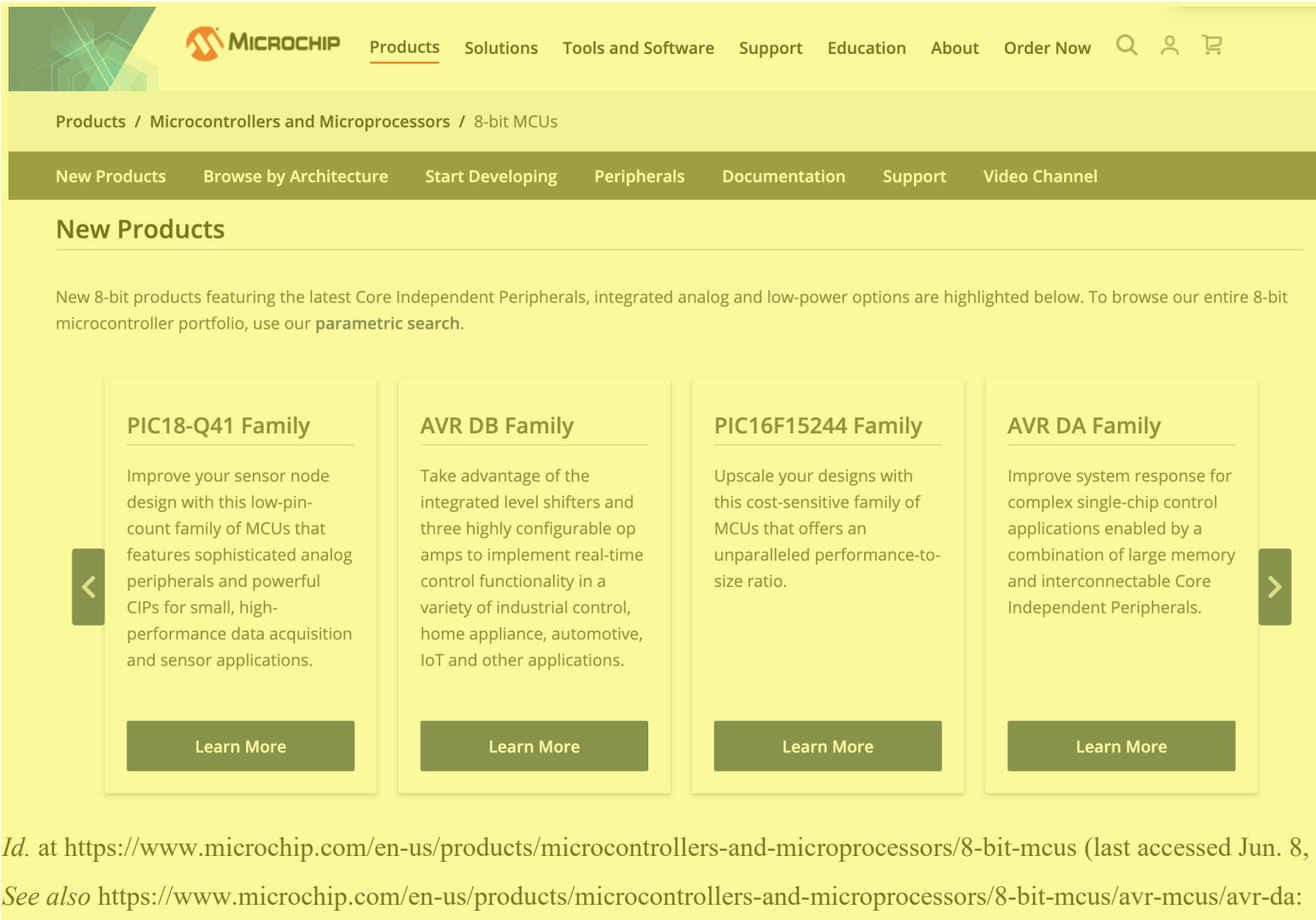
32-bit PIC Microcontrollers (MCUs)

32-bit SAM Microcontrollers (MCU)

CEC 32-bit MCUs

Legacy 32-bit Microcontrollers (MCUs)

Applications, Reference Designs and Solutions



Products / Microcontrollers and Microprocessors / 8-bit MCUs

New Products Browse by Architecture Start Developing Peripherals Documentation Support Video Channel

## New Products

New 8-bit products featuring the latest Core Independent Peripherals, integrated analog and low-power options are highlighted below. To browse our entire 8-bit microcontroller portfolio, use our [parametric search](#).

### PIC18-Q41 Family

Improve your sensor node design with this low-pin-count family of MCUs that features sophisticated analog peripherals and powerful CIPs for small, high-performance data acquisition and sensor applications.

Learn More

### AVR DB Family

Take advantage of the integrated level shifters and three highly configurable op amps to implement real-time control functionality in a variety of industrial control, home appliance, automotive, IoT and other applications.

Learn More

### PIC16F15244 Family

Upscale your designs with this cost-sensitive family of MCUs that offers an unparalleled performance-to-size ratio.

Learn More

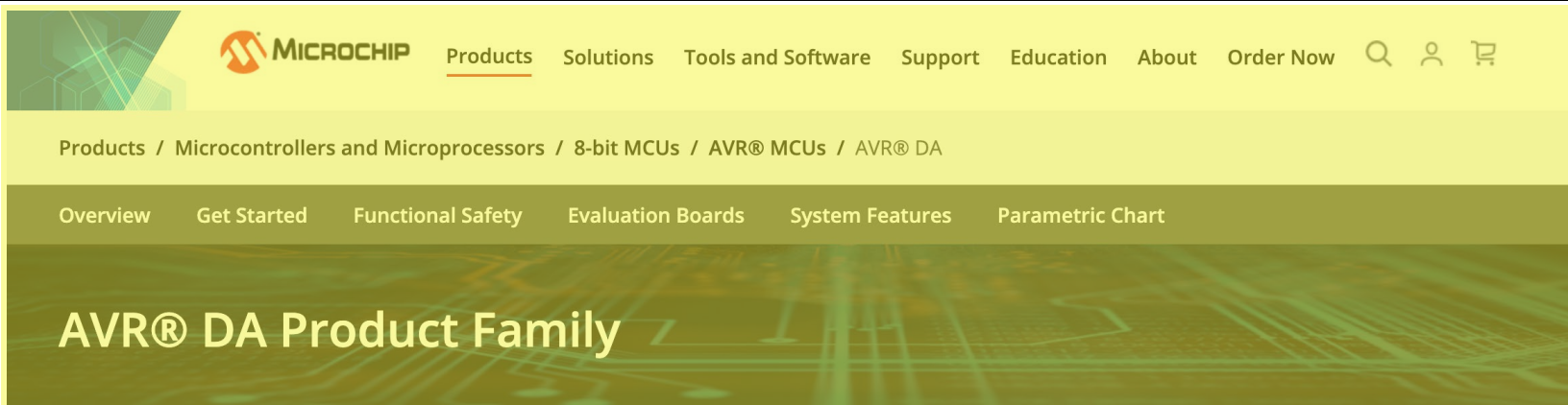
### AVR DA Family

Improve system response for complex single-chip control applications enabled by a combination of large memory and interconnectable Core Independent Peripherals.

Learn More

*Id.* at <https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors/8-bit-mcus> (last accessed Jun. 8, 2021).  
*See also* <https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors/8-bit-mcus/avr-mcus/avr-da>:

Plaintiffs' Final Infringement Contentions  
Civil Action No.: 6:20-cv-245  
Claim Chart re: U.S. Patent No. 7,216,301

	 <p>The screenshot displays the Microchip website's navigation bar with links for Products, Solutions, Tools and Software, Support, Education, About, and Order Now. Below the navigation bar, a breadcrumb trail reads: Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs / AVR® DA. A secondary navigation bar contains links for Overview, Get Started, Functional Safety, Evaluation Boards, System Features, and Parametric Chart. The main heading on the page is "AVR® DA Product Family". Below this, a text block states: "See also <a href="https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors/8-bit-mcus/avr-mcus">https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors/8-bit-mcus/avr-mcus</a> (e.g., providing pre-defined shortcuts that enable direct access to the item “AVR® DA”):"</p>
--	---

The screenshot displays the Microchip website's product page for 8-bit MCUs. The navigation bar at the top includes links for Products, Solutions, Tools and Software, Support, Education, About, and Order Now, along with search, user, and shopping cart icons. A breadcrumb trail indicates the path: Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs. The main content area features four product family cards: AVR DB Family, AVR DA Family, ATtiny1627 Family, and ATtiny1607 Family. Each card provides a brief description of its capabilities and a 'Learn More' button. The AVR DB Family is described as having integrated level shifters and three highly configurable op amps for real-time control in industrial, home appliance, automotive, IoT, and other applications. The AVR DA Family improves system response for complex single-chip control applications with large memory and interconnectable Core Independent Peripherals. The ATtiny1627 Family improves real-time performance with high-speed measurement or small amplitude signals in harsh and noisy environments with a 12-bit differential ADC and Programmable Gain Amplifier (PGA). The ATtiny1607 Family improves performance and reduces the complexity of real-time control applications with high-speed analog and hardware-based Core Independent Peripherals. Navigation arrows are present on the left and right sides of the product cards. Below the product cards, the text 'See also:' is visible.

**MICROCHIP** Products Solutions Tools and Software Support Education About Order Now

Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs

**AVR DB Family**

Take advantage of the integrated level shifters and three highly configurable op amps to implement real-time control functionality in a variety of industrial control, home appliance, automotive, IoT and other applications.

[Learn More](#)

**AVR DA Family**

Improve system response for complex single-chip control applications enabled by a combination of large memory and interconnectable Core Independent Peripherals.

[Learn More](#)

**ATtiny1627 Family**

Improve real-time performance with high-speed measurement, or measure small amplitude signals in harsh and noisy environments with the 12-bit differential ADC and Programmable Gain Amplifier (PGA).

[Learn More](#)

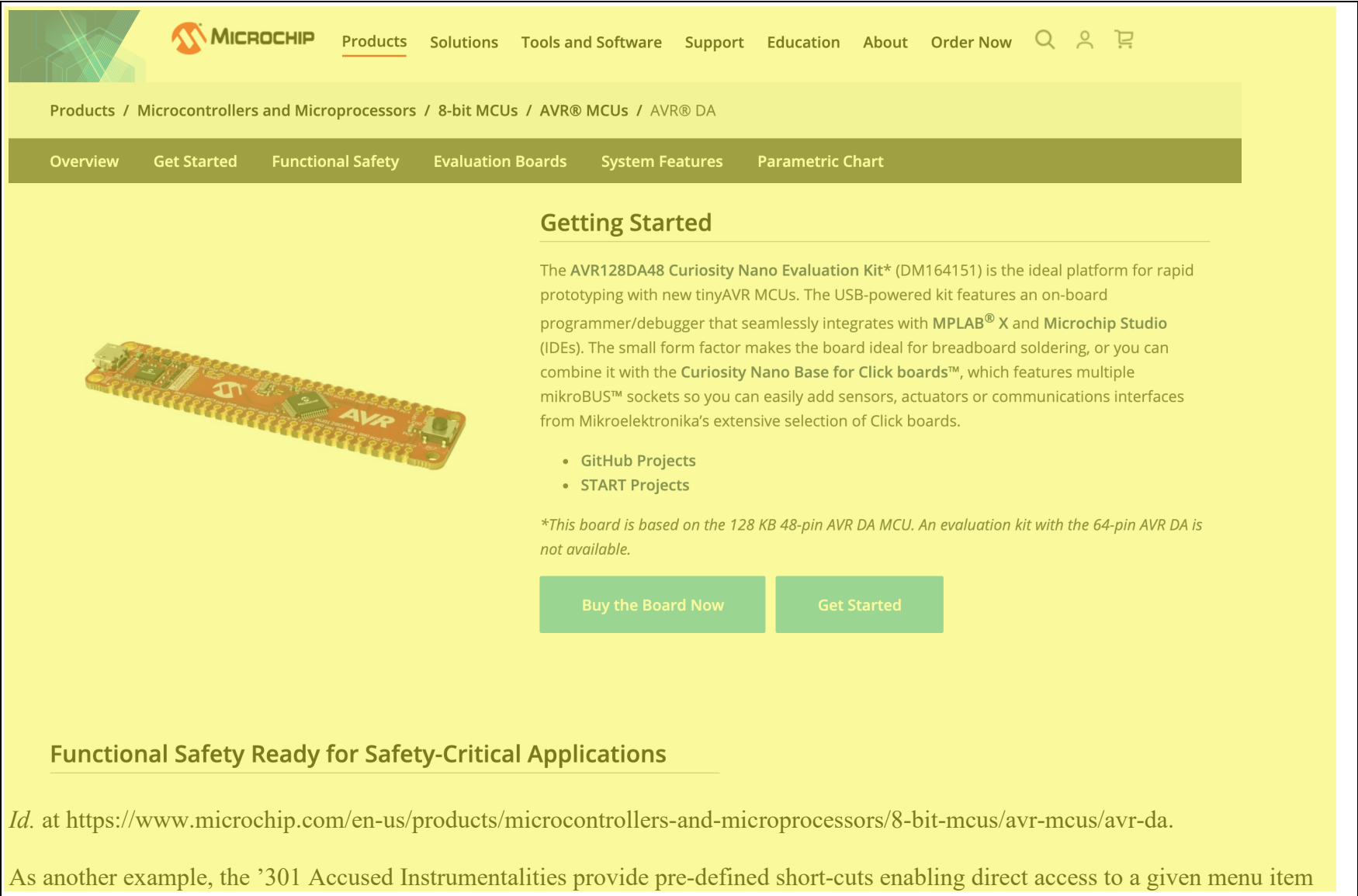
**ATtiny1607 Family**

Improve performance and reduce the complexity of your real-time control applications with high-speed analog and hardware-based Core Independent Peripherals.

[Learn More](#)

*See also:*





The screenshot shows the Microchip website's product page for the AVR128DA48 Curiosity Nano Evaluation Kit. The page has a yellow header with the Microchip logo and navigation links: Products, Solutions, Tools and Software, Support, Education, About, and Order Now. A search icon, user icon, and shopping cart icon are also present. Below the header, a breadcrumb trail reads: Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs / AVR® DA. A secondary navigation bar includes links for Overview, Get Started, Functional Safety, Evaluation Boards, System Features, and Parametric Chart. The main content area features a 3D rendering of the AVR128DA48 Curiosity Nano Evaluation Kit on the left. To the right, the 'Getting Started' section describes the kit as an ideal platform for rapid prototyping with new tinyAVR MCUs, highlighting its USB-powered design, on-board programmer/debugger, and compatibility with MPLAB® X and Microchip Studio (IDEs). It also mentions the kit's small form factor and the ability to combine it with the Curiosity Nano Base for Click boards™. A list of links for GitHub Projects and START Projects is provided. A note states that the board is based on the 128 KB 48-pin AVR DA MCU and that an evaluation kit with the 64-pin AVR DA is not available. Two buttons, 'Buy the Board Now' and 'Get Started', are located at the bottom of the 'Getting Started' section. Below this, a section titled 'Functional Safety Ready for Safety-Critical Applications' is visible. At the bottom of the page, the text reads: 'Id. at https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors/8-bit-mcus/avr-mcus/avr-da.' and 'As another example, the '301 Accused Instrumentalities provide pre-defined short-cuts enabling direct access to a given menu item'.

Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs / AVR® DA

Overview Get Started Functional Safety Evaluation Boards System Features Parametric Chart

## Getting Started

The AVR128DA48 Curiosity Nano Evaluation Kit\* (DM164151) is the ideal platform for rapid prototyping with new tinyAVR MCUs. The USB-powered kit features an on-board programmer/debugger that seamlessly integrates with MPLAB® X and Microchip Studio (IDEs). The small form factor makes the board ideal for breadboard soldering, or you can combine it with the Curiosity Nano Base for Click boards™, which features multiple mikroBUS™ sockets so you can easily add sensors, actuators or communications interfaces from Mikroelektronika's extensive selection of Click boards.

- GitHub Projects
- START Projects

*\*This board is based on the 128 KB 48-pin AVR DA MCU. An evaluation kit with the 64-pin AVR DA is not available.*

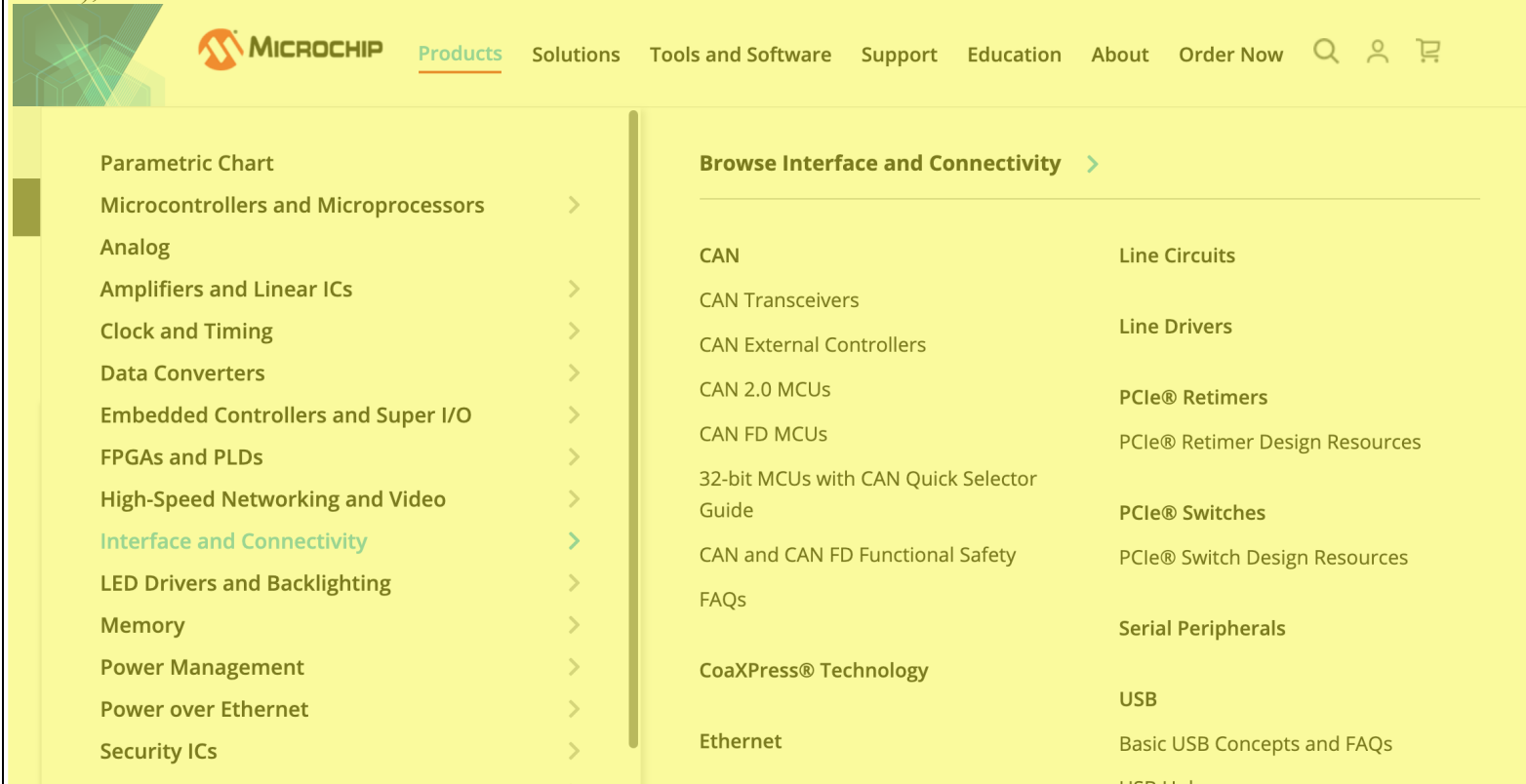
Buy the Board Now Get Started

## Functional Safety Ready for Safety-Critical Applications

*Id. at <https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors/8-bit-mcus/avr-mcus/avr-da>.*

As another example, the '301 Accused Instrumentalities provide pre-defined short-cuts enabling direct access to a given menu item

(e.g., the '301 Accused Instrumentalities provide pre-defined shortcuts, such as "CAN 2.0 MCUs" that enable direct access to those items), as shown below:

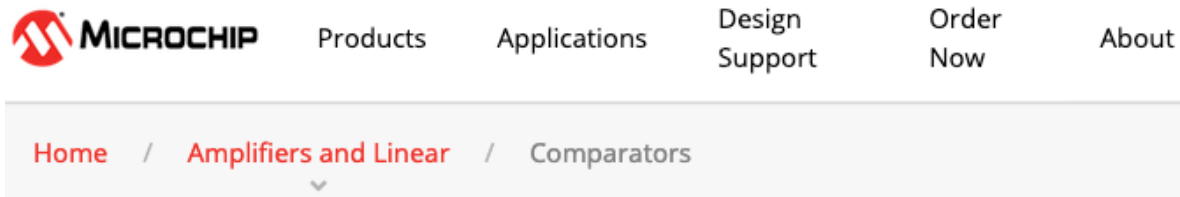


See <https://www.microchip.com/> (last accessed June 8, 2021).

dynamically constructing the Active Path when a pre-defined short-cut is executed, with one said active link corresponding to each of the items necessary to access said given item using said graphical user menu system.

The '301 Accused Instrumentalities dynamically construct the Active Path, which has been construed by this Court (Dkt. 34) as a sequence of links dynamically created as the menu system is navigated, when a pre-defined short-cut is executed, with one said active link corresponding to each of the menu items necessary to access said given menu item using said graphical user menu system.

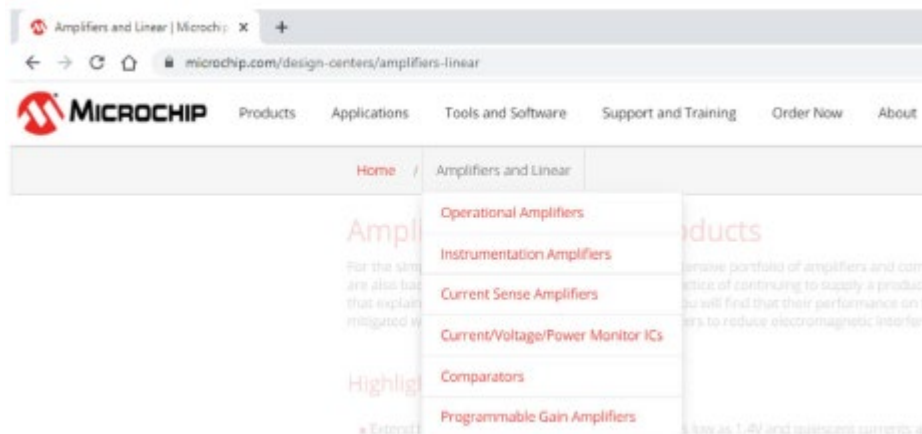
For example, the '301 Accused Instrumentalities dynamically construct the sequence of links dynamically created as the menu system is navigated when a pre-defined short-cut is executed, with one said active link corresponding to each of the menu items necessary to access said given menu item using said graphical user menu system (*e.g.*, the sequence of links dynamically created as a menu item is navigated is automatically constructed when “Amplifiers and Linear” or “Comparators” is executed, with each active link “Amplifiers and Linear” or “Comparators” corresponding to each of the menu items necessary to access the given menu item using the graphical user menu system).



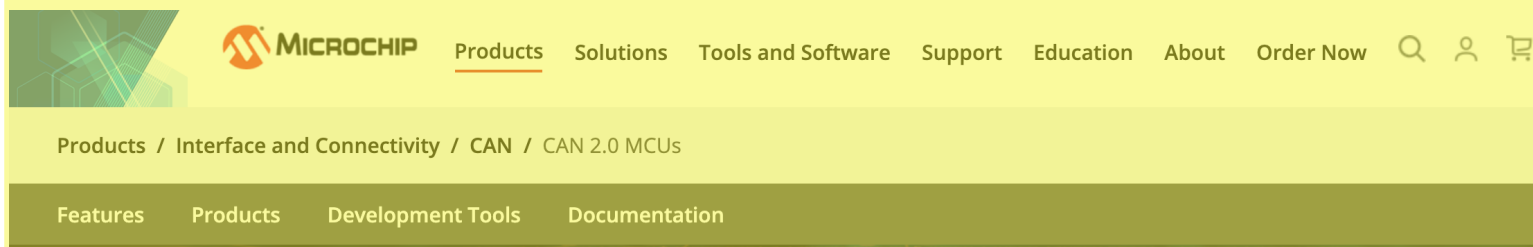
*See, e.g.*, <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).

*See also* MCHP-CADD0\_0000935:

Plaintiffs' Final Infringement Contentions  
 Civil Action No.: 6:20-cv-245  
 Claim Chart re: U.S. Patent No. 7,216,301



As another example, the '301 Accused Instrumentalities dynamically construct the sequence of links dynamically created as the menu system is navigated when a pre-defined short-cut is executed (e.g., when the short-cut corresponding to the link "CAN 2.0 MCUs" is executed), with one said active link (e.g., the link "CAN 2.0 MCUs" in the path "Products / Interface and Connectivity / CAN / CAN 2.0 MCUs") corresponding to each of the menu items necessary to access said given menu item using said graphical user menu system (e.g., the link "CAN 2.0 MCUs" corresponding to the menu item "CAN 2.0 MCUs"), as shown below:



See, e.g., <https://www.microchip.com/en-us/products/interface-and-connectivity/can/can-2-0-mcus>; see also *id.*:

Plaintiffs' Final Infringement Contentions  
 Civil Action No.: 6:20-cv-245  
 Claim Chart re: U.S. Patent No. 7,216,301

The screenshot displays the Microchip website's product navigation menu. The 'Interface and Connectivity' category is highlighted in blue. Below this, a list of product types is shown, including CAN, CAN Transceivers, CAN External Controllers, CAN 2.0 MCUs, CAN FD MCUs, 32-bit MCUs with CAN Quick Selector Guide, CAN and CAN FD Functional Safety, FAQs, CoaXPress® Technology, Ethernet, High-Voltage Interface, and INICnet™ Technology. To the right of these, a list of specific products is displayed, including Line Circuits, Line Drivers, PCIe® Retimers, PCIe® Retimer Design Resources, PCIe® Switches, PCIe® Switch Design Resources, Serial Peripherals, USB, Basic USB Concepts and FAQs, USB Hubs, USB-C® Power Delivery Controllers, and USB Bridge Controllers.

**MICROCHIP** Products Solutions Tools and Software Support Education About Order Now

Parametric Chart

Microcontrollers and Microprocessors >

Analog >

Amplifiers and Linear ICs >

Clock and Timing >

Data Converters >

Embedded Controllers and Super I/O >

FPGAs and PLDs >

High-Speed Networking and Video >

**Interface and Connectivity >**

LED Drivers and Backlighting >

Memory >

Power Management >

Power over Ethernet >

Security ICs >

Sensors and Motor Drive >

Services >

Smart Energy/Metering >

**Browse Interface and Connectivity >**

CAN

CAN Transceivers

CAN External Controllers

CAN 2.0 MCUs

CAN FD MCUs

32-bit MCUs with CAN Quick Selector Guide

CAN and CAN FD Functional Safety

FAQs

CoaXPress® Technology

Ethernet

High-Voltage Interface

INICnet™ Technology

Line Circuits

Line Drivers

PCIe® Retimers

PCIe® Retimer Design Resources

PCIe® Switches

PCIe® Switch Design Resources

Serial Peripherals

USB

Basic USB Concepts and FAQs

USB Hubs

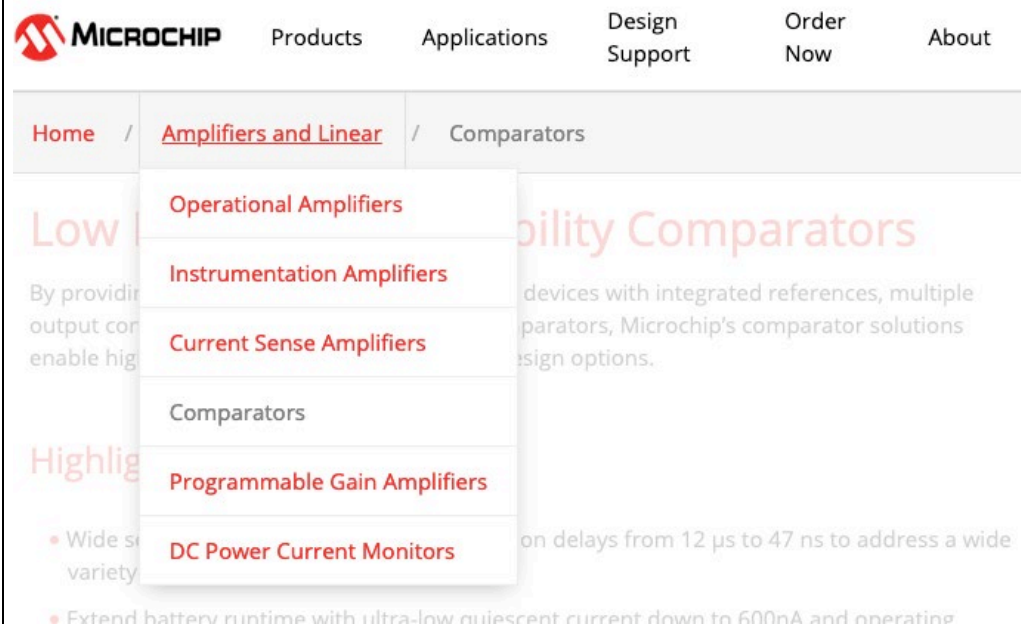
USB-C® Power Delivery Controllers

USB Bridge Controllers

3. The method for navigating according to claim 1, wherein rolling over a selected active link triggers the display of sibling items on the hierarchically subordinate levels associated with said selected active link.

The '301 Accused Instrumentalities roll over a selected active link to trigger the display of sibling items on the hierarchically subordinate levels associated with said selected active link.

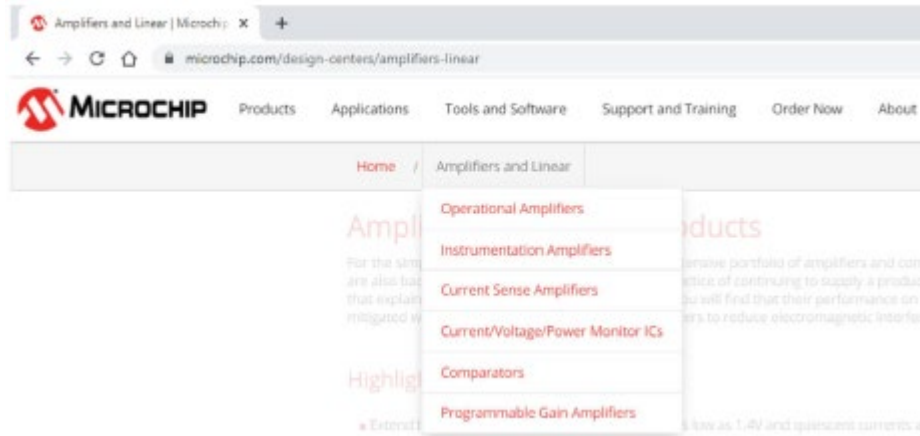
For example, for the '301 Accused Instrumentalities, rolling over a selected active link triggers the display of sibling items on the hierarchically subordinate levels associated with said selected active link (e.g., the '301 Accused Instrumentalities allow rolling over the link "Amplifiers and Linear" to trigger the display of sibling items on the hierarchically subordinate levels associated with the selected active link "Amplifiers and Linear" such as "Operational Amplifiers," "Instrumentation Amplifiers," "Current Sense Amplifiers," "Comparators," "Programmable Gain Amplifiers," and "DC Power Current Monitors") as shown below:



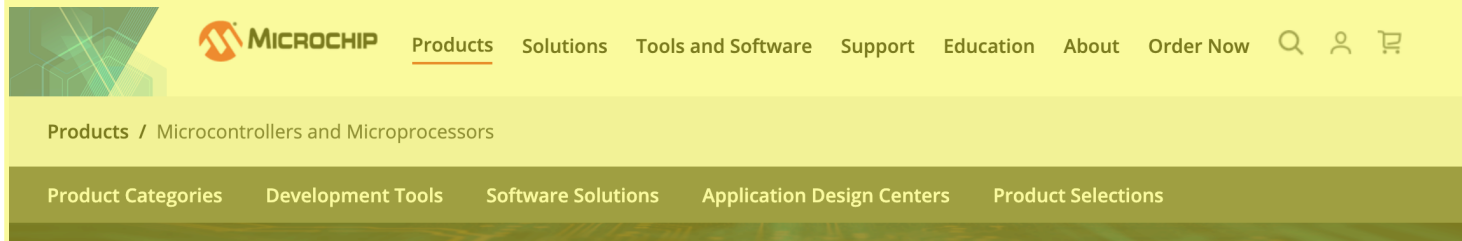
See, e.g., <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).

See also MCHP-CADD0\_0000935:

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 Claim Chart re: U.S. Patent No. 7,216,301



As another example, in the '301 Accused Instrumentalities, rolling over a selected active link triggers the display of sibling items on the hierarchically subordinate levels associated with said selected active link (e.g., rolling over and selecting “Microcontrollers and Microprocessors” in “Products / Microcontrollers and Microprocessors / 8-bit MCUs”) to trigger the display of sibling menu items on the hierarchically subordinate levels (e.g., “Product Categories,” “Developments,” “Software Solutions,” “Application Design Centers,” and “Product Selections”), as shown below:



See <https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors> (last accessed Jun. 8, 2021).

To the extent Microchip contends that the '301 Accused Instrumentalities do not literally meet the limitation of “rolling over a selected active link triggers the display of sibling items on the hierarchically subordinate levels associated with said selected active link,” the limitation is met under the doctrine of equivalents by the '301 Accused Instrumentalities because they perform substantially the same

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Civil Action No.: 6:20-cv-245  
Claim Chart re: U.S. Patent No. 7,216,301

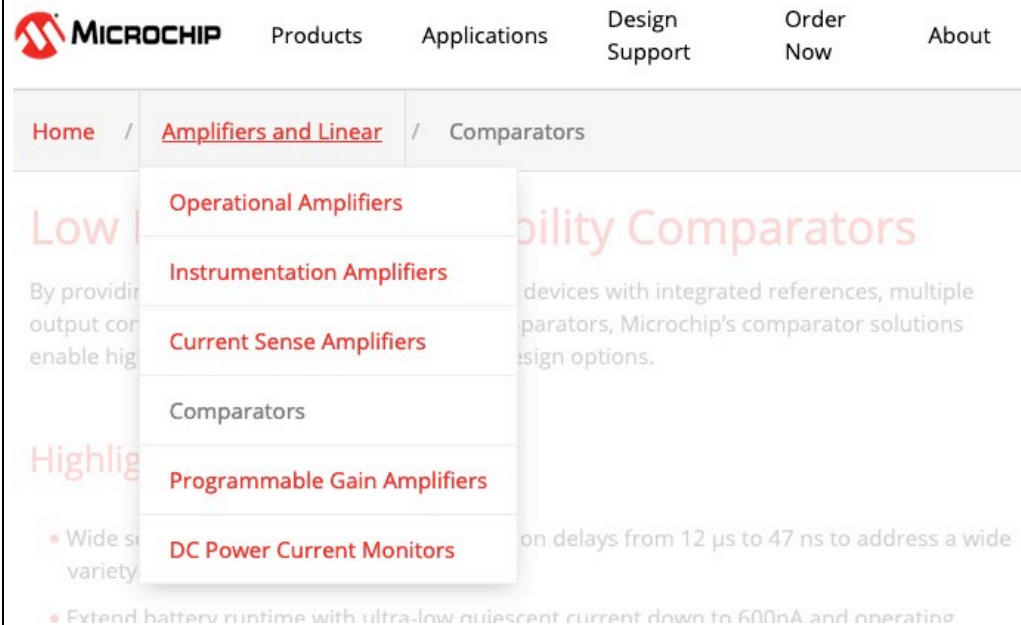
	function (displaying the sibling menu items on the hierarchically subordinate levels such as “Product Categories,” “Developments,” “Software Solutions,” “Application Design Centers,” and “Product Selections”) in substantially the same way (e.g., displaying the sibling menu items that are on the hierarchically subordinate levels associated with the link “Microcontrollers and Microprocessors”) to produce substantially the same result (e.g., sibling menu items on the level associated with the link “Microcontrollers and Microprocessors” are displayed and available for selection).
--	--



4. The method for navigating according to claim 1, wherein selecting a given active link triggers the execution of a function associated with said given active link.

The '301 Accused Instrumentalities select a given active link to trigger the execution of a function associated with said given active link.

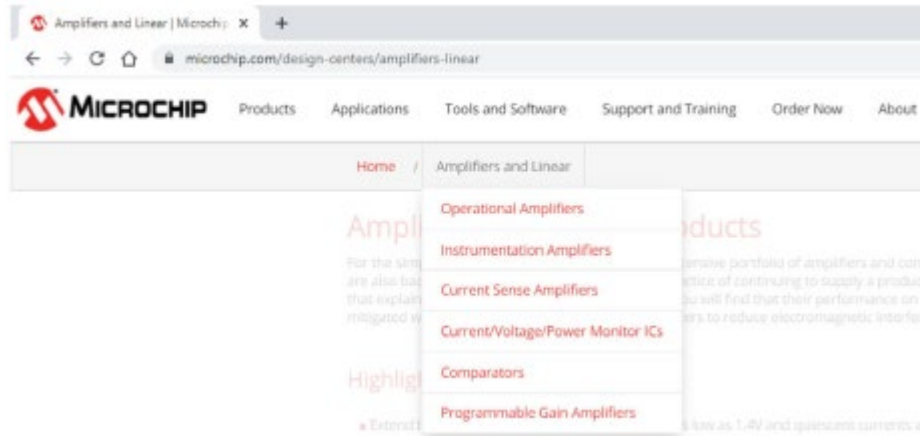
For example, the '301 Accused Instrumentalities allow selecting a given active link to trigger the execution of a function associated with said given active link (*e.g.*, selecting a given active link such as “Amplifiers and Linear” triggers the execution of a function, such as displaying sibling menus (*e.g.*, “Operational Amplifiers,” “Instrumentation Amplifiers,” “Current Sense Amplifiers,” “Comparators,” “Programmable Gain Amplifiers,” and “DC Power Current Monitors”) or directing user to certain content) as shown below:



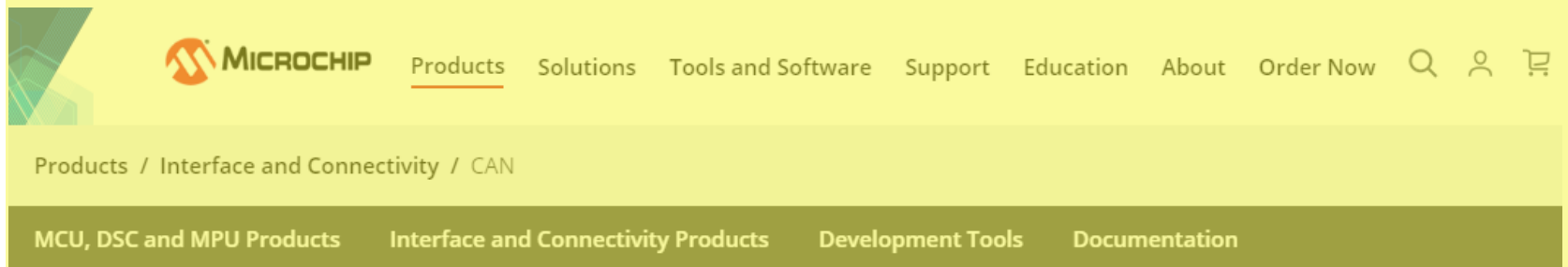
See, *e.g.*, <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).

See also MCHP-CADDO\_0000935.

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 Civil Action No.: 6:20-cv-245  
 Claim Chart re: U.S. Patent No. 7,216,301

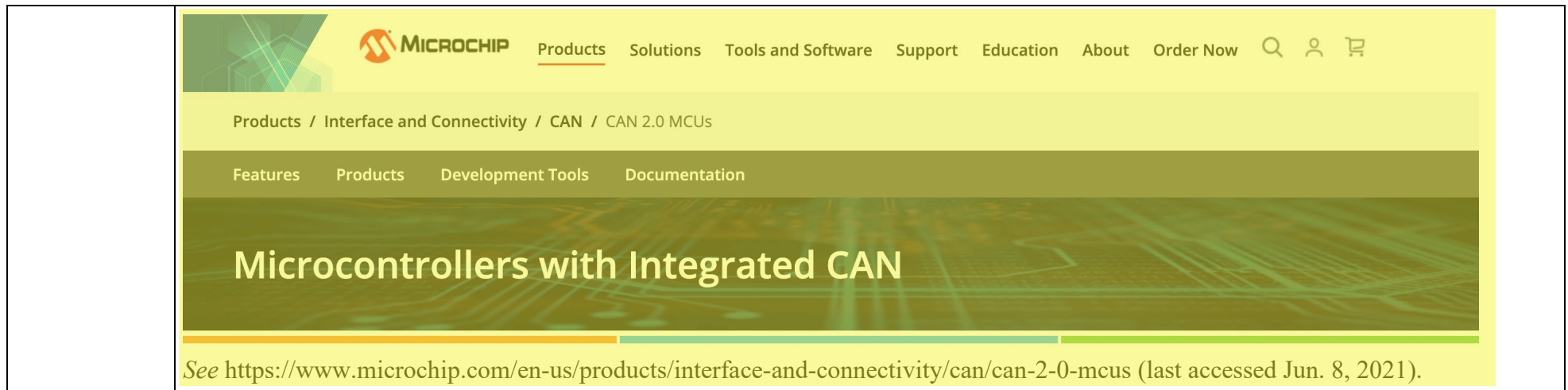


As another example, selecting a given active link triggers the execution of a function associated with said given active link (e.g., selecting a given active link such as “CAN” in the path “Products / Interface and Connectivity / CAN / CAN 2.0 MCUs” triggers the execution of a function, such as displaying sibling menus (e.g., “MCU, DSC and MPU Products,” “Interface and Connectivity Products,” “Development Tools,” and “Documentation” associated with “CAN”) or directing user to certain content such as content under the link “CAN”), as shown below:



See, e.g., <https://www.microchip.com/en-us/products/interface-and-connectivity/can> (last accessed June 8, 2021); see also

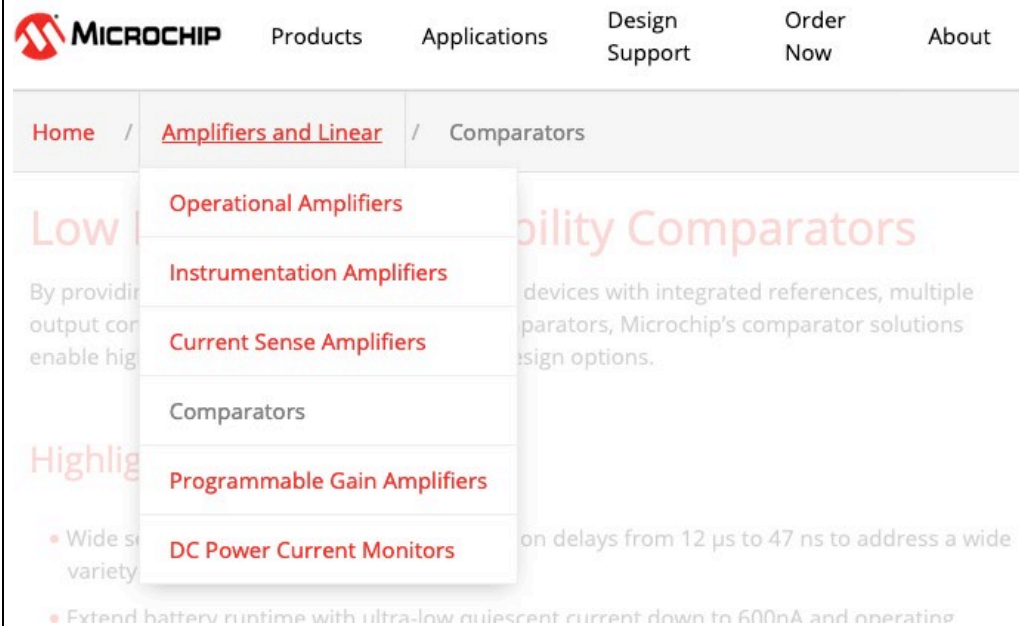
Plaintiffs' Final Infringement Contentions  
Civil Action No.: 6:20-cv-245  
Claim Chart re: U.S. Patent No. 7,216,301



5. The method for navigating according to claim 1, wherein selecting a given active link triggers display of information associated with said given active link.

The '301 Accused Instrumentalities select a given active link to trigger the display of information associated with said given active link.

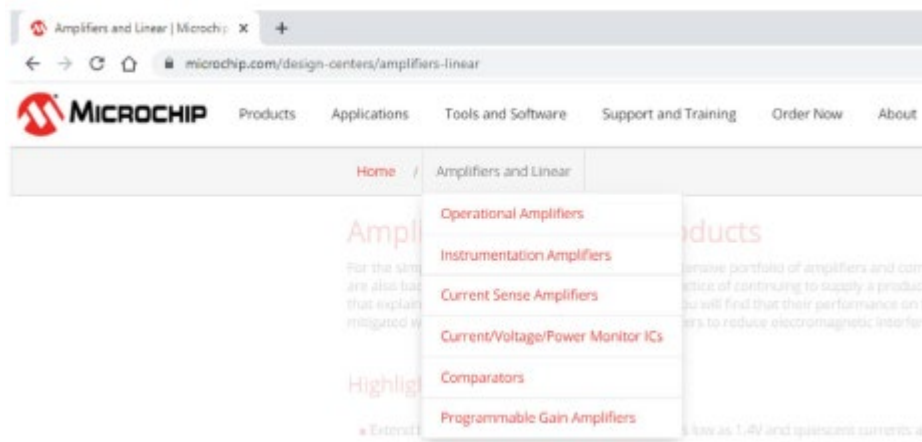
For example, the '301 Accused Instrumentalities allow selecting a given active link to trigger the display of information associated with said given active link (*e.g.*, the '301 Accused Instrumentalities allow selecting the link "Amplifiers and Linear" to trigger display of information (*e.g.*, displaying "Operational Amplifiers," "Instrumentation Amplifiers," "Current Sense Amplifiers," "Comparators," "Programmable Gain Amplifiers," and "DC Power Current Monitors") associated with the link "Amplifiers and Linear") as shown below:



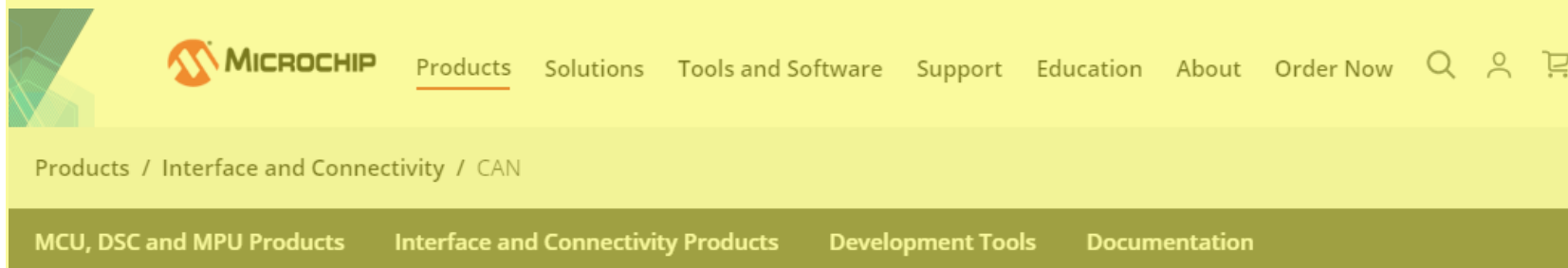
See, *e.g.*, <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).

See also MCHP-CADD0\_0000935:

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As another example, selecting a given active link triggering the execution of a function associated with said given active link (*e.g.*, selecting a given active link such as “CAN” in the path “Products / Interface and Connectivity / CAN / CAN 2.0 MCUs” triggers the execution of a function, such as displaying sibling menus (*e.g.*, “MCU, DSC and MPU Products,” “Interface and Connectivity Products,” “Development Tools,” and “Documentation” associated with “CAN”) or directing user to certain content such as content under the link “CAN”), as shown below:

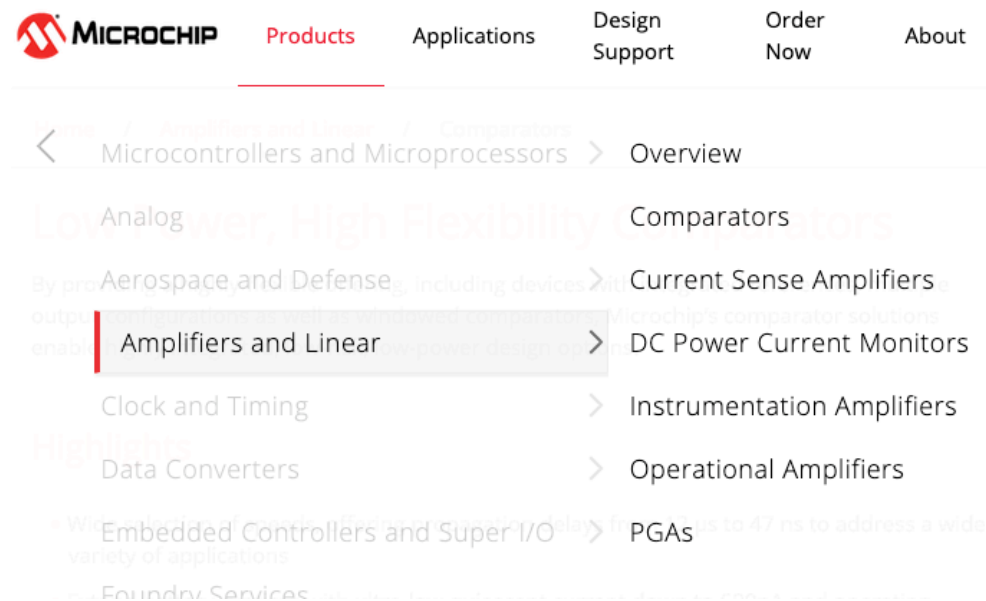


See, *e.g.*, <https://www.microchip.com/en-us/products/interface-and-connectivity/can> (last accessed June 8, 2021).

9. A method for navigating within a multi-level hierarchical information structure where each level in the structure contains plural items, each said item being at least one of a function, a pointer to a location, and a pointer to another level, said method comprising the steps of:

To the extent that the preamble of claim 9 is a limitation, the '301 Accused Instrumentalities provide, or support the provision of, a method for navigating within a multi-level hierarchical information structure where each level in the structure contains plural items, each said item being at least one of a function, a pointer to a location, and a pointer to another level.

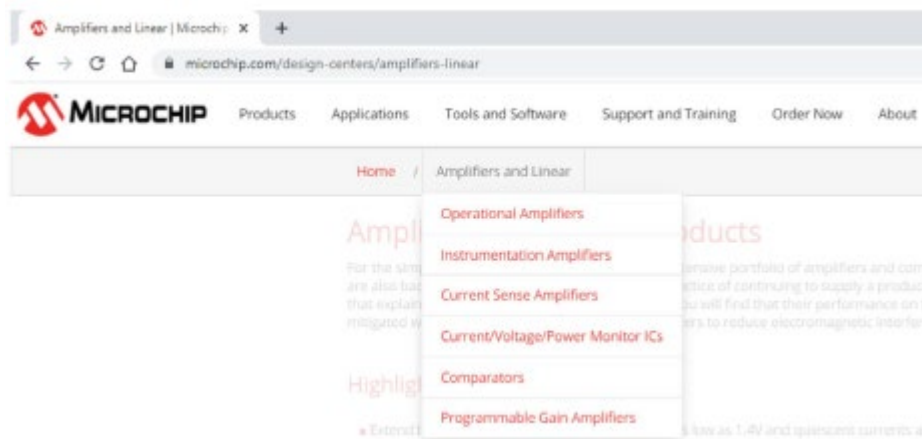
For example, the '301 Accused Instrumentalities provide a method for navigating within a multi-level hierarchical information structure where each level in the structure contains plural items, each said item being at least one of a function, a pointer to a location, and a pointer to another level (*e.g.*, the '301 Accused Instrumentalities provide a method for navigating within a multi-level hierarchical collapsing menu structure where each level in the information structure contains plural items, each said item being at least one of a function, a pointer to a location, and a pointer to another level (*e.g.*, "Products" includes "Amplifiers and Linear," which includes "Operational Amplifiers," "Instrumentation Amplifiers," "Current Sense Amplifiers," "Comparators," "Programmable Gain Amplifiers," and "DC Power Current Monitors")) as shown below:



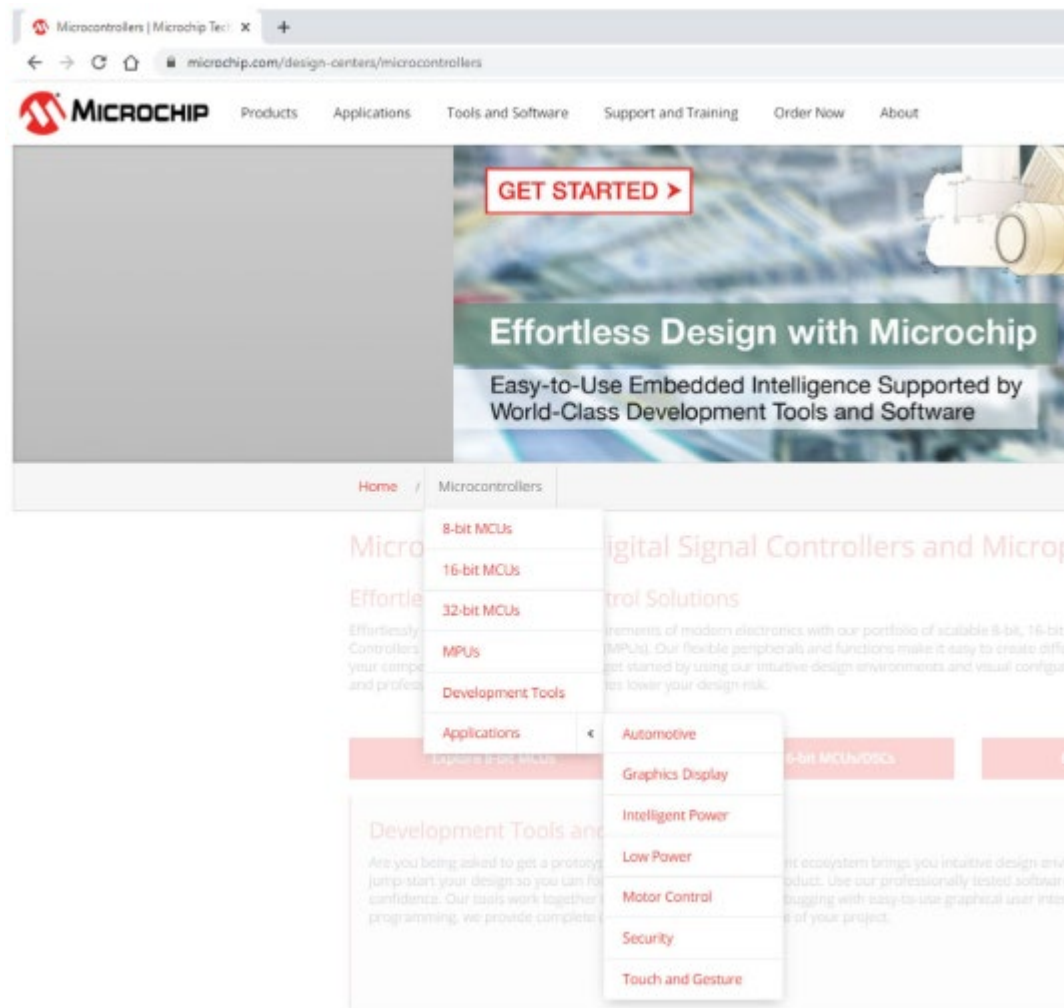
See, *e.g.*, <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).

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 Claim Chart re: U.S. Patent No. 7,216,301

See also MCHP-CADDO\_0000935:



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 Claim Chart re: U.S. Patent No. 7,216,301

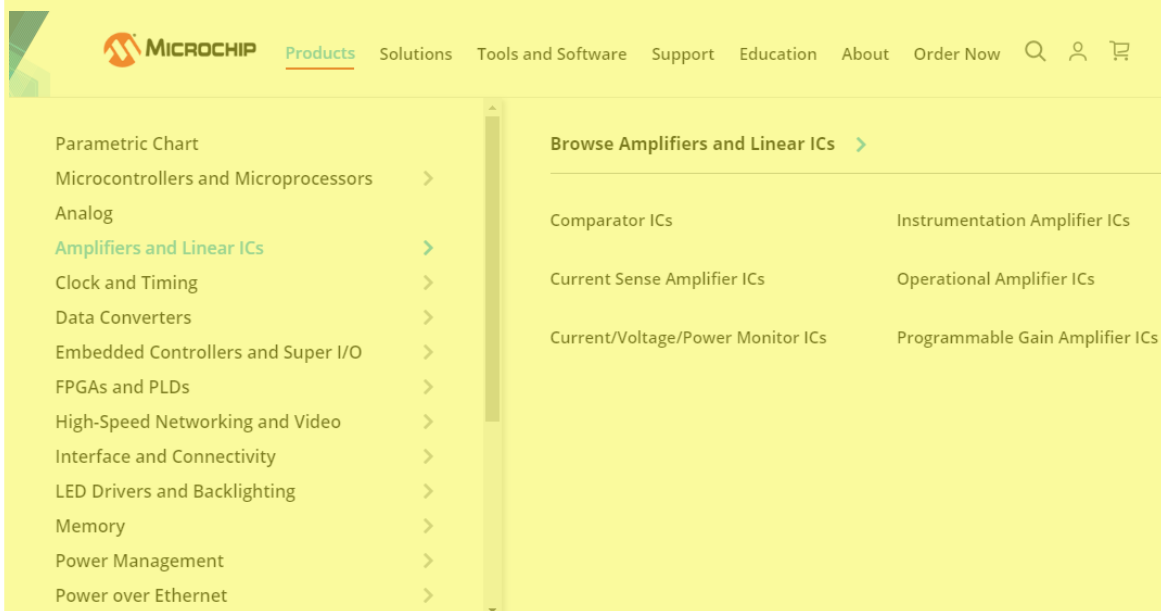


See MCHP-CADDO-0000931.



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 Civil Action No.: 6:20-cv-245  
 Claim Chart re: U.S. Patent No. 7,216,301

As another example, , the '301 Accused Instrumentalities provide a method for navigating within a multi-level hierarchical information structure where each level in the structure contains plural items, each said item being at least one of a function, a pointer to a location, and a pointer to another level (e.g., the '301 Accused Instrumentalities provide a method for navigating within a multi-level hierarchical collapsing menu structure where each level in the information structure contains plural items, each said item being at least one of a function, a pointer to a location, and a pointer to another level (e.g., "Products" includes "Amplifiers and Linear," which includes "Operational Amplifiers ICs," "Instrumentation Amplifiers ICs," "Current Sense Amplifiers ICs," "Comparators ICs," "Programmable Gain Amplifiers ICs," and "Current/Voltage/Power Monitor ICs")) as shown below:

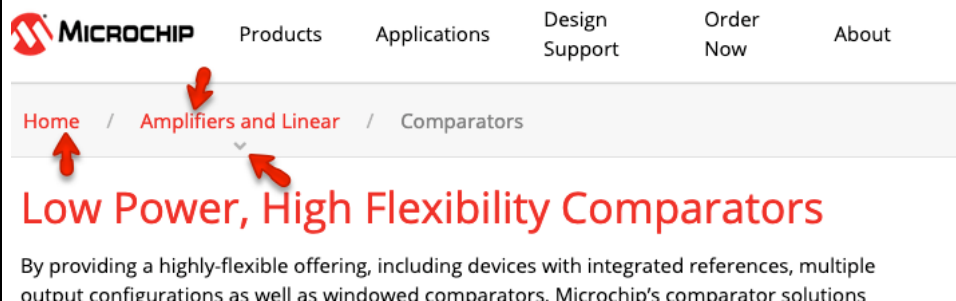


See <https://www.microchip.com/en-us/products/amplifiers-and-linear-ics/comparator-ics> (last accessed June 8, 2021).

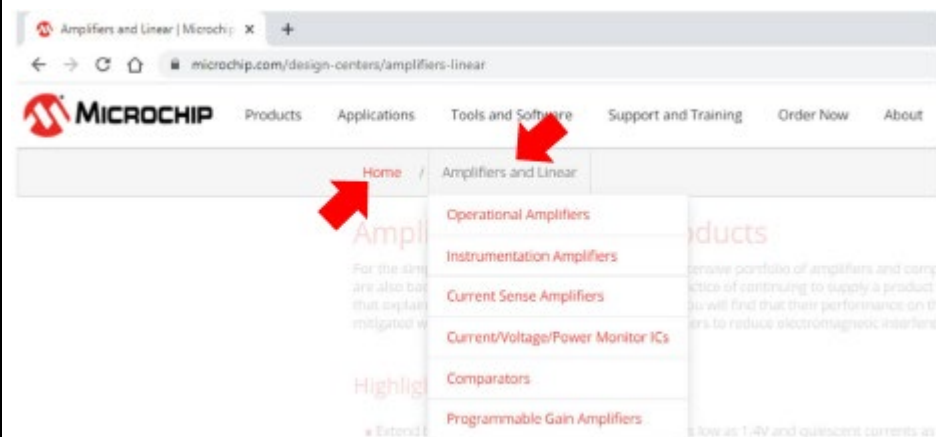
displaying a graphic element representing a root of the hierarchical information structure;

The '301 Accused Instrumentalities display a graphic element representing a root of the hierarchical information structure.

For example, the '301 Accused Instrumentalities provide displaying a graphic element representing a root of the hierarchical information structure (e.g., the '301 Accused Instrumentalities display a number of graphic elements each representing a root of the hierarchical information structure) as shown below:



See, e.g., <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020) (annotated).



See MCHP-CADDO\_0000935 (annotated).

As another example, the '301 Accused Instrumentalities provide displaying a graphic element (e.g., graphic element "Microcontrollers and Microprocessors >") representing a root of the hierarchical information structure as shown below:

The screenshot displays the Microchip website's product navigation structure. The top navigation bar includes the Microchip logo and links for Products, Solutions, Tools and Software, Support, Education, About, and Order Now. The left sidebar lists various product categories, with 'Microcontrollers and Microprocessors' highlighted. The main content area shows a 'Browse Microcontrollers and Microprocessors' section with a grid of product categories.

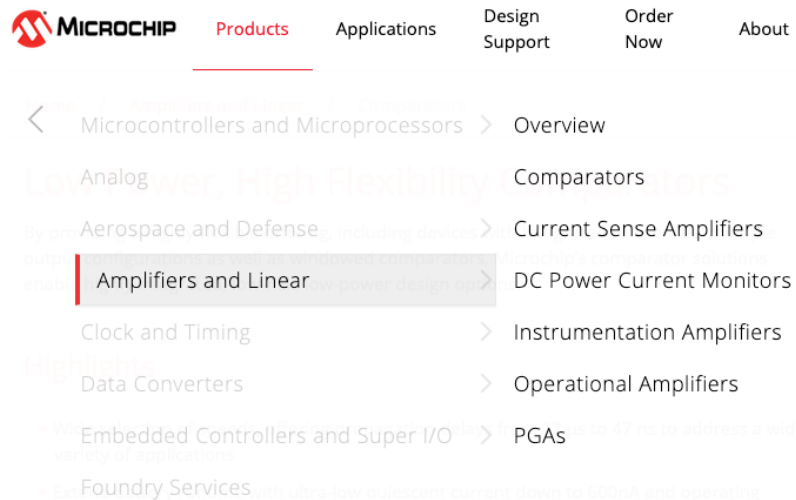
Product Category	Sub-category	Product Line
Parametric Chart		
<b>Microcontrollers and Microprocessors</b>		
Analog		
Amplifiers and Linear ICs		
Clock and Timing		
Data Converters		
Embedded Controllers and Super I/O		
FPGAs and PLDs		
High-Speed Networking and Video		
Interface and Connectivity		
LED Drivers and Backlighting		
Memory Products		
Power Management		
Power over Ethernet		
Security ICs		
	<b>Browse Microcontrollers and Microprocessors</b>	
	<b>8-bit MCUs</b>	<b>32-bit MCUs</b>
	PIC® MCUs	32-bit PIC Microcontrollers (MCUs)
	AVR® MCUs	32-bit SAM Microcontrollers (MCU)
	8051 MCUs	CEC 32-bit MCUs
	Peripherals	Legacy 32-bit Microcontrollers (MCUs)
	Functional Safety	Applications, Reference Designs and Solutions
	PIC18 to PIC24 Migration	32-bit Embedded Security
	<b>16-bit MCUs</b>	32-bit Functional Safety
	PIC24F MCUs - 16 MIPS	Softpacks
	dsPIC33C Digital Signal Controllers	Third-Party Partners
	dsPIC33E DSCs - 70 MIPS	

See <https://www.microchip.com/> (last accessed Jun. 8, 2021)

browsing the hierarchical information structure by rolling over said graphic element using a pointing device, wherein browsing results in the display of sibling items or hierarchically subordinate items;

The '301 Accused Instrumentalities browse the hierarchical information structure by rolling over said graphic element using a pointing device, wherein browsing results in the display of sibling items or hierarchically subordinate items.

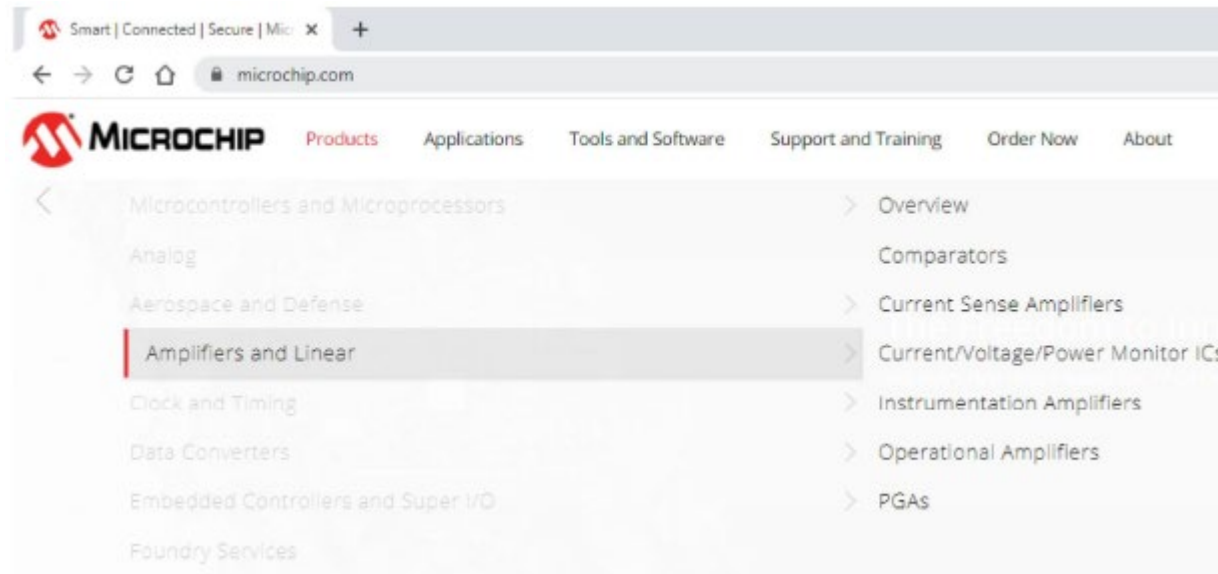
For example, the '301 Accused Instrumentalities allow browsing the hierarchical information structure by rolling over said graphic element using a pointing device (*e.g.*, by rolling over, via a mouse, “Applications and Linear” or the “down arrow” or the “side arrow”), wherein browsing results in the display of sibling items or hierarchically subordinate items (*e.g.*, browsing results in the display of items such as “Operational Amplifiers,” “Instrumentation Amplifiers,” “Current Sense Amplifiers,” “Comparators,” “PGAs,” and “DC Power Current Monitors”) as shown below:



See, *e.g.*, <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).

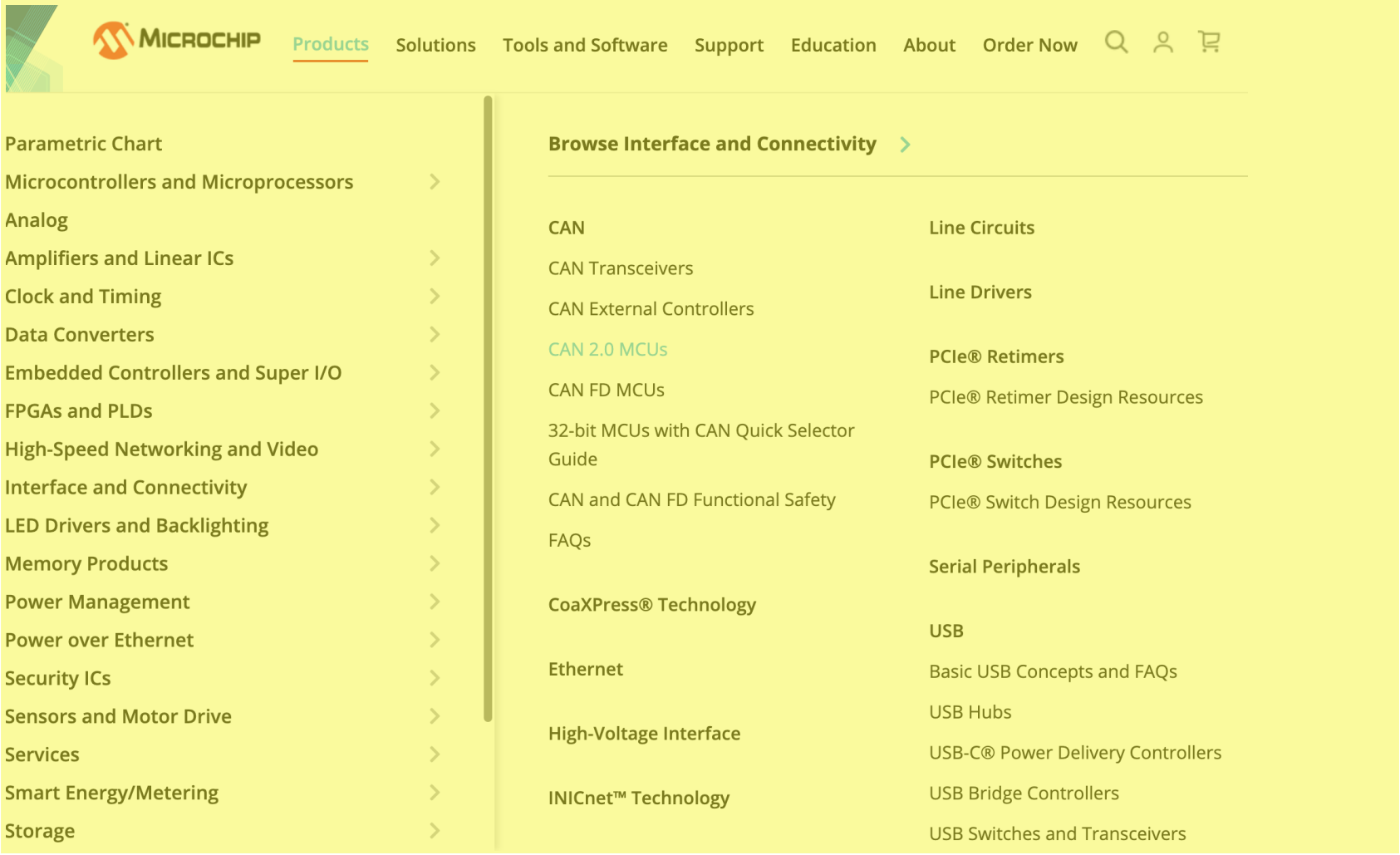
See also MCHP-CADD0\_0000934:

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As another example, the '301 Accused Instrumentalities allow browsing the hierarchical information structure by rolling over said graphic element using a pointing device (*e.g.*, by rolling over, via a mouse, “Interface and Connectivity”), wherein browsing results in the display of sibling items or hierarchically subordinate items (*e.g.*, browsing results in the display of sibling or subordinate items such as “CAN” and “CAN 2.0 MCUs””) as shown below:

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The screenshot displays the Microchip website's navigation and product categories. The top navigation bar includes the Microchip logo, a 'Products' link (highlighted with a red underline), and other links: Solutions, Tools and Software, Support, Education, About, and Order Now. Search, user, and shopping cart icons are also present.

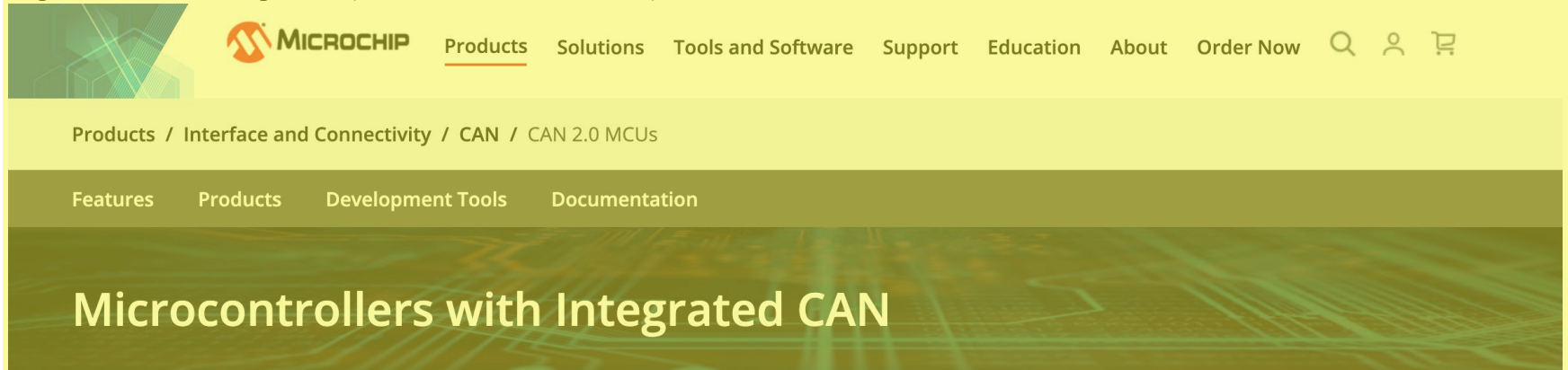
On the left, a vertical list of product categories is shown, each with a right-pointing chevron: Parametric Chart, Microcontrollers and Microprocessors, Analog, Amplifiers and Linear ICs, Clock and Timing, Data Converters, Embedded Controllers and Super I/O, FPGAs and PLDs, High-Speed Networking and Video, Interface and Connectivity, LED Drivers and Backlighting, Memory Products, Power Management, Power over Ethernet, Security ICs, Sensors and Motor Drive, Services, Smart Energy/Metering, and Storage.

The main content area is titled 'Browse Interface and Connectivity' with a right-pointing chevron. Below this title, a grid of product categories is displayed:

- CAN**
  - CAN Transceivers
  - CAN External Controllers
  - CAN 2.0 MCUs
  - CAN FD MCUs
  - 32-bit MCUs with CAN Quick Selector Guide
  - CAN and CAN FD Functional Safety
  - FAQs
- CoaXPress® Technology**
- Ethernet**
- High-Voltage Interface**
- INICnet™ Technology**
- Line Circuits**
- Line Drivers**
- PCIe® Retimers**
  - PCIe® Retimer Design Resources
- PCIe® Switches**
  - PCIe® Switch Design Resources
- Serial Peripherals**
- USB**
  - Basic USB Concepts and FAQs
  - USB Hubs
  - USB-C® Power Delivery Controllers
  - USB Bridge Controllers
  - USB Switches and Transceivers

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<https://www.microchip.com/> (last accessed Jun. 8, 2021); *see also*:

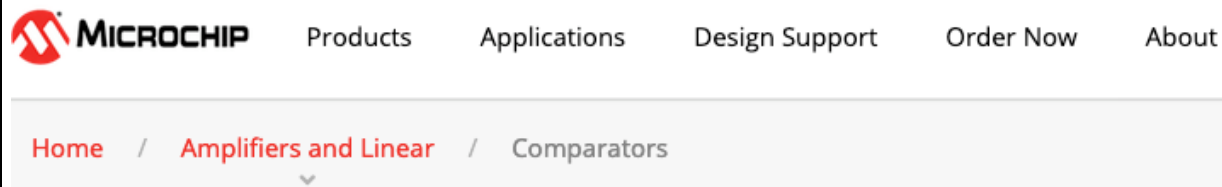


<https://www.microchip.com/en-us/products/interface-and-connectivity/can/can-2-0-mcus> (last accessed Jun. 8, 2021).

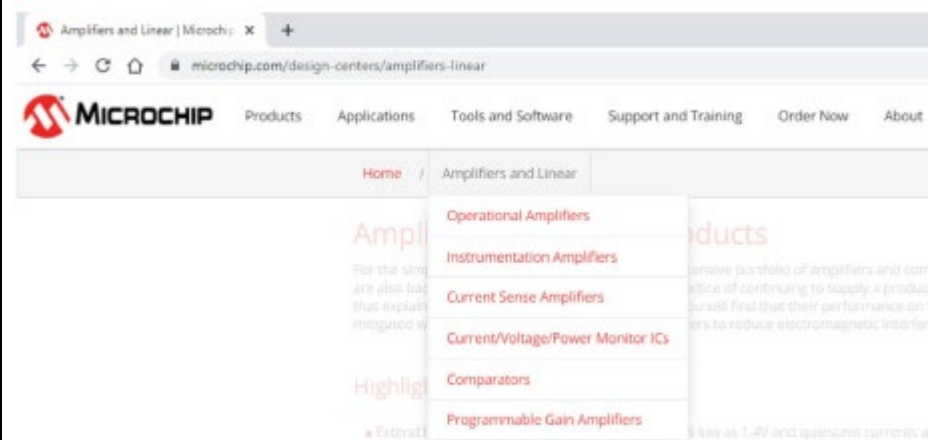
selecting one of the displayed items;

The '301 Accused Instrumentalities selects one of the displayed items.

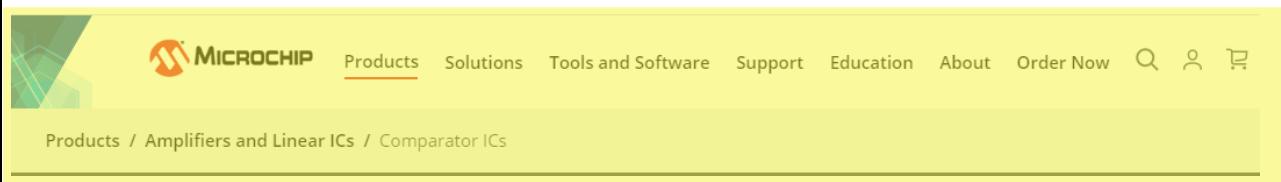
For example, the '301 Accused Instrumentalities allow selecting one of the displayed items (*e.g.*, selecting “Amplifiers and Linear”).



See, *e.g.*, <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).



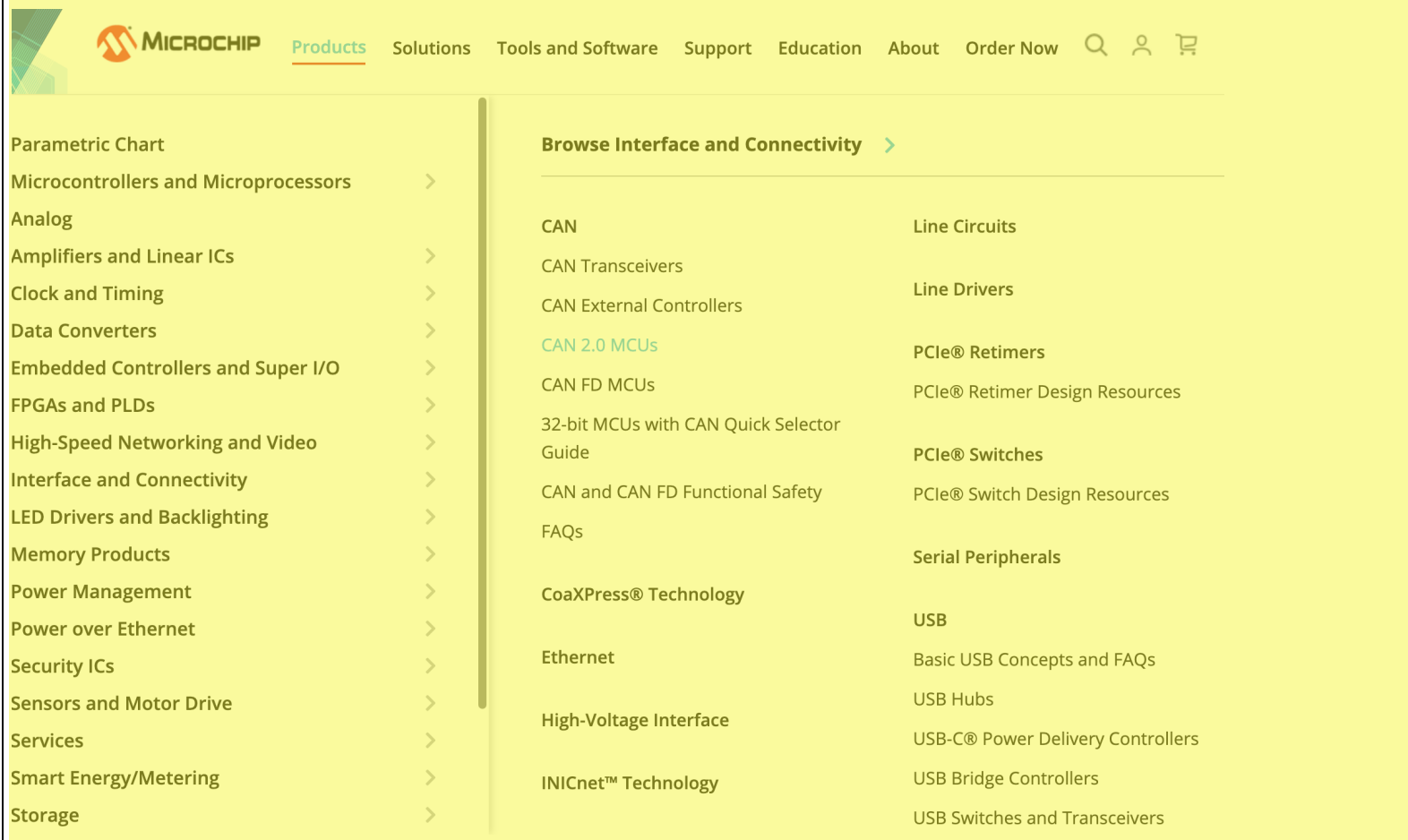
See also MCHP-CADD0\_0000935:

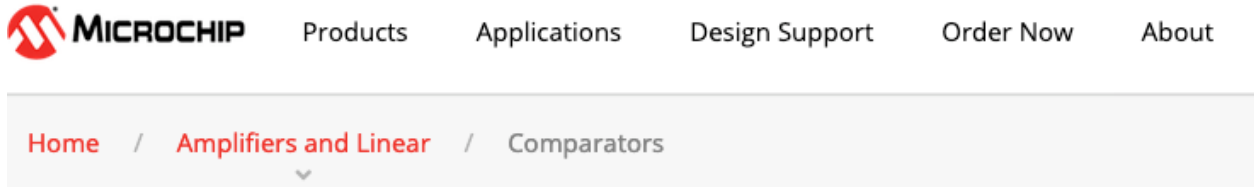




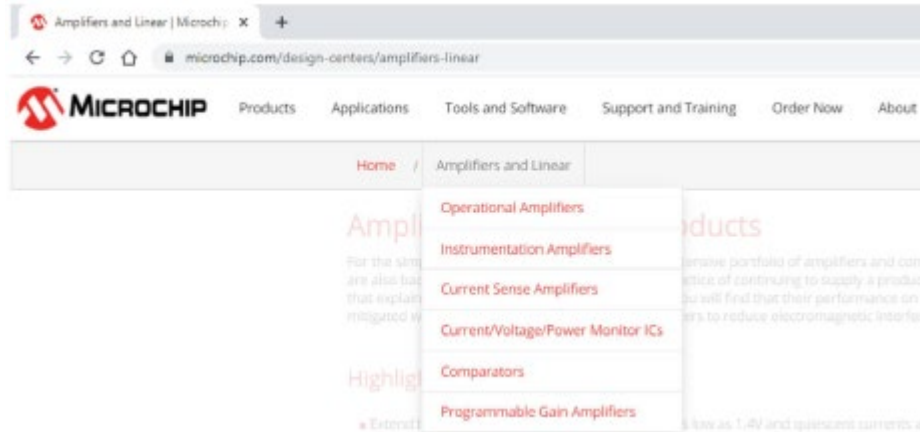
See also <https://www.microchip.com/en-us/products/amplifiers-and-linear-ics/comparator-ics> (last accessed June 8, 2021).

See also <https://www.microchip.com/> (last accessed Jun. 8, 2021) (selecting “CAN 2.0 MCUs”);

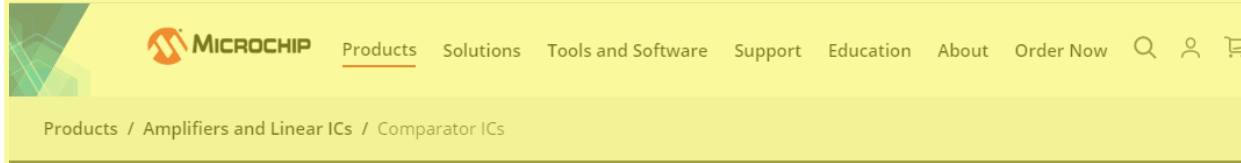


<p>dynamically constructing an Active Path as a sequence of active links as items are selected, with one said active link corresponding to each of the items selected, said active links providing direct access to one of a function, corresponding level and item without the need to navigate from the root of the hierarchical information structure;</p>	<p>The '301 Accused Instrumentalities dynamically construct an Active Path, which has been construed by this Court (Dkt. 34) as a sequence of links dynamically created as a menu item is navigated, as a sequence of active links as items are selected, with one said active link corresponding to each of the items selected, said active links providing direct access to one of a function, corresponding level and item without the need to navigate from the root of the hierarchical information structure.</p> <p>For example, the '301 Accused Instrumentalities dynamically construct a sequence of links dynamically created as a menu item is navigated (<i>e.g.</i>, the '301 Accused Instrumentalities dynamically constructed sequence of links dynamically created as a menu item is navigated (<i>e.g.</i>, “Amplifiers and Linear—Comparators”) as a sequence of active links as items are selected (<i>e.g.</i>, as “Amplifiers and Linear” and “Comparators” are selected)), with one said active link corresponding to each of the items selected, said active links providing direct access to one of a function, corresponding level and item without the need to navigate from the root of the hierarchical information structure (<i>e.g.</i>, the '301 Accused Instrumentalities' sequence of links dynamically created as a menu item is navigated “Amplifiers and Linear—Comparators” corresponds to each of the items sequentially selected, including “Amplifiers and Linear” and “Comparators”), as shown below:</p>  <p><i>See, e.g.</i>, <a href="https://www.microchip.com/design-centers/amplifiers-linear/comparators">https://www.microchip.com/design-centers/amplifiers-linear/comparators</a> (last visited Feb. 10, 2020).</p> <p><i>See also</i> MCHP-CADD0_0000935:</p>
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See also <https://www.microchip.com/en-us/products/amplifiers-and-linear-ics/comparator-ics> (last accessed June 8, 2021) below:



See also MCHP-CADD0\_0001040-41:

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319 <div class="breadcrumbs-open-btn"><span>Menu</span></div>
320 <div class="breadcrumbs">
321   <div class="breadcrumbs-top-bar">
322     <span class="breadcrumbs-close-btn">x</span>
323   </div>
324   <div class="crumbs-wrapper">
325     <div class="crumb">
326       <div class="crumb-top">
327         <a href="/">Home</a>
328       </div>
329     </div>
330     <span class="breadcrumbs-separator">/</span>
331     <div class="crumb has-menu">
332       <div class="crumb-top current">
333         <a href="/design-centers/amplifiers-linear">Amplifiers
334         and Linear</a>
335       <div class="open-menu"><i class="fa fa-angle-down"
336       ></i></div>
337     </div>
338     <ul>
339       <li class="">
340         <a class="" href="/design-centers/amplifiers-linear/operational-ampli-
341         fiers">Operational Amplifiers</a>
342       </li>
343       <li class="">
344         <a class="" href="/design-centers/amplifiers-linear/instrumentation-a-
345         mplifiers">Instrumentation Amplifiers</a>
346       </li>
347       <li class="">
348         <a class="" href="/design-centers/amplifiers-linear/current-sense-amp-
349         lifiers">Current Sense Amplifiers</a>
350       </li>
351       <li class="">

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349         <a class=" " href="/design-centers/amplifiers-linear/current-voltage-p
ower-monitors">Current/Voltage/Power Monitor ICs</a>
350     </li>
351     <li class="">
352         <a class=" " href="/design-centers/amplifiers-linear/comparators">Comp
arators</a>
353     </li>
354     <li class="">
355         <a class=" " href="/design-centers/amplifiers-linear/programmable-gain
-amplifiers">Programmable Gain Amplifiers</a>
356     </li>
357         </ul>
358     </div>
359
360 </div>
361 </div>
362 <div class="breadcrumbs-curtain"></div>
363
364 <div class="row" data-sf-element="Row">

```

As another example, the '301 Accused Instrumentalities dynamically construct a sequence of links dynamically created as a menu item is navigated (*e.g.*, links in the path “Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs / AVR® DA” are dynamically created as their corresponding menu item is navigated) as a sequence of active links as items are selected (*e.g.*, as menu items corresponding to the path “Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs / AVR® DA” are selected)), with one said active link corresponding to each of the items selected (*e.g.*, each link in “Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs / AVR® DA” corresponds to an item selected), said active links providing direct access to one of a function, corresponding level and item without the need to navigate from the root of the hierarchical information structure (*e.g.*, the links in “Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs / AVR® DA” provide direct access to “Overview,” “Get Started,” “Functional Safety,” “Evaluation Boards,” “System Features,” and “Parametric Chart”, or direct access to content, level, or items) as shown below:

The screenshot displays the Microchip website's product page for the AVR® DA Product Family. The top navigation bar includes the Microchip logo and links for Products, Solutions, Tools and Software, Support, Education, About, and Order Now. A breadcrumb trail reads: Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs / AVR® DA. Below this, a secondary navigation bar lists Overview, Get Started, Functional Safety, Evaluation Boards, System Features, and Parametric Chart. The main heading is "AVR® DA Product Family".

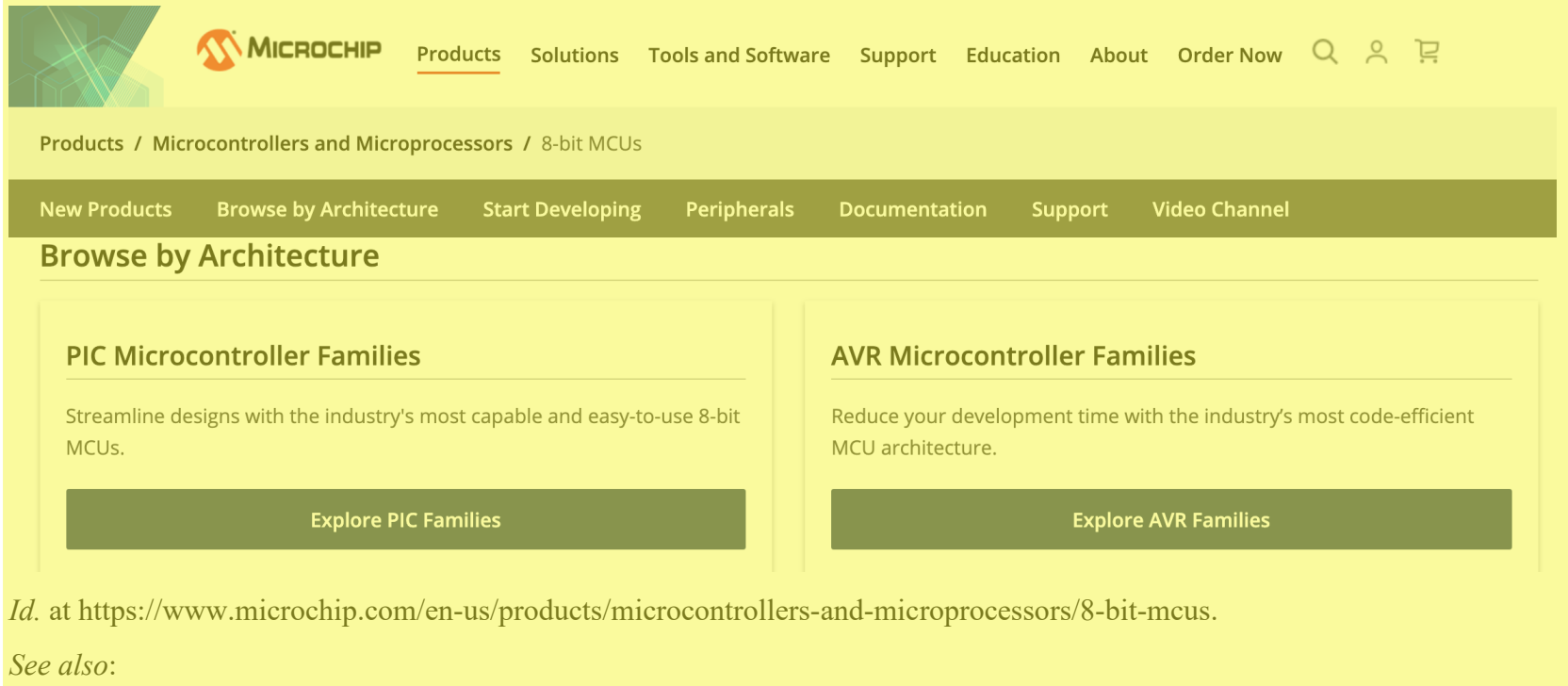
See <https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors/8-bit-mcus/avr-mcus/avr-da> (last accessed Jun. 8, 2021).

See also:

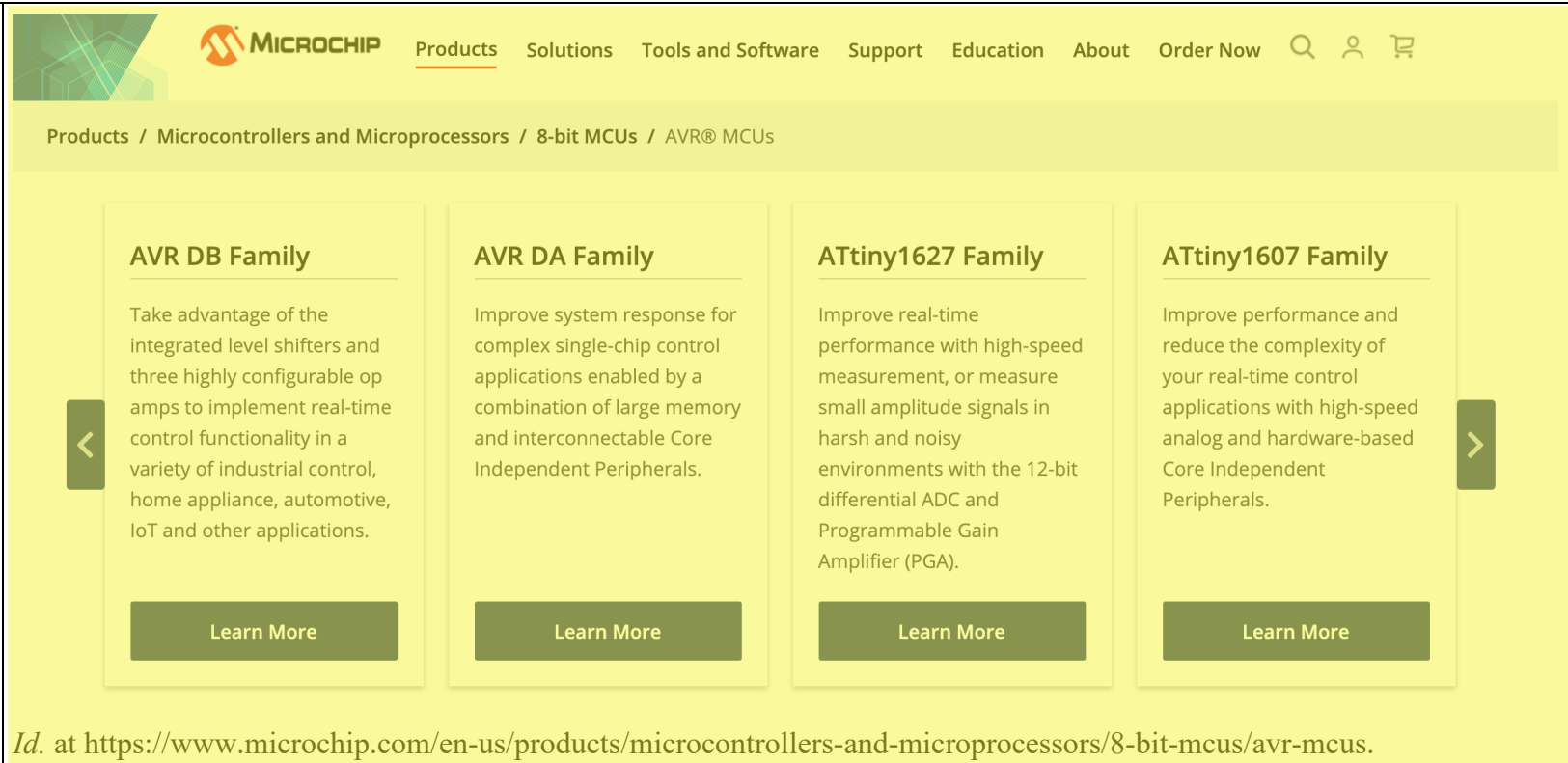
The screenshot also shows a secondary navigation bar with links for Product Categories, Development Tools, Software Solutions, Application Design Centers, and Product Selections. Below this, there are four buttons: Explore 8-bit MCUs, Explore 16-bit MCUs/DSCs, Explore 32-bit MCUs, and Explore MPUs.

Id. at <https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors>.

*See also:*





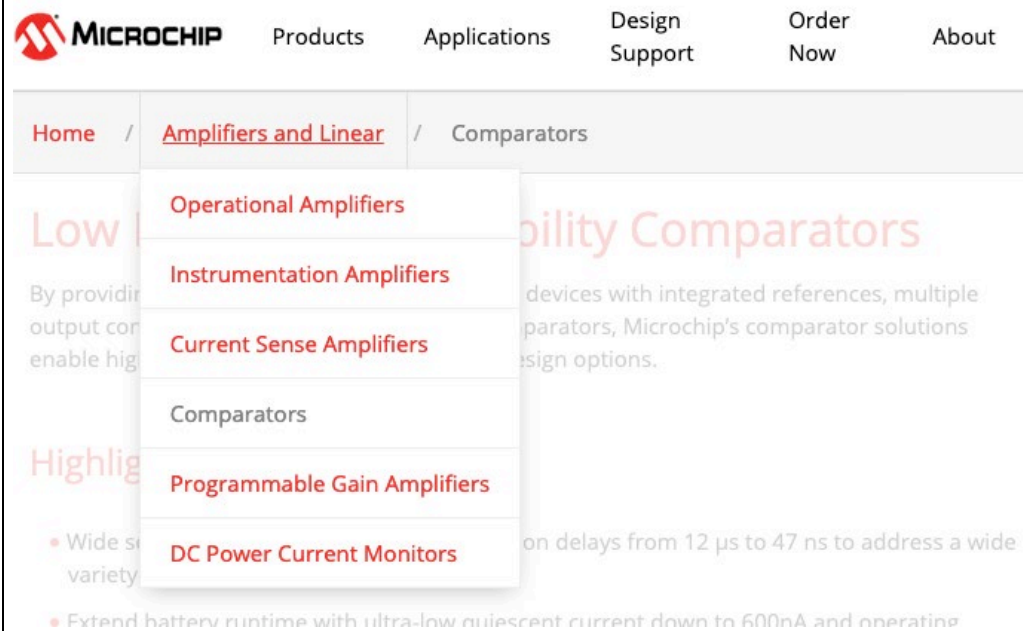




each said active link enabling the user to directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items without affecting the Active Path.

Each said active link in the '301 Accused Instrumentalities enables user to directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items without affecting the Active Path, which has been construed by this Court (Dkt. 34) as a sequence of links dynamically created as a menu item is navigated.

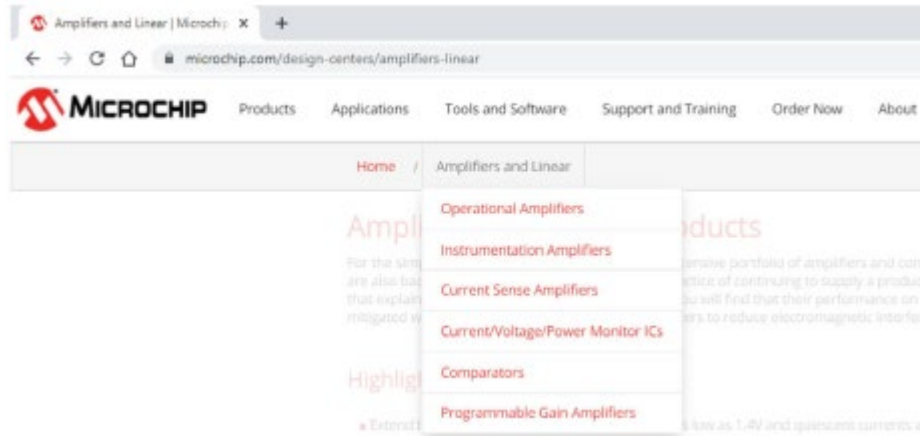
For example, each active link in the '301 Accused Instrumentalities enables the user to directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items without affecting the sequence of links dynamically created as a menu item is navigated (*e.g.*, the '301 Accused Instrumentalities enable the user to directly browse all items under “Amplifiers and Linear” such as “Operational Amplifiers,” “Instrumentation Amplifiers,” “Current Sense Amplifiers,” “Comparators,” “Programmable Gain Amplifiers,” and “DC Power Current Monitors” without affecting the sequence of links dynamically created as a menu item “Amplifiers and Linear—Comparators”) as shown below:



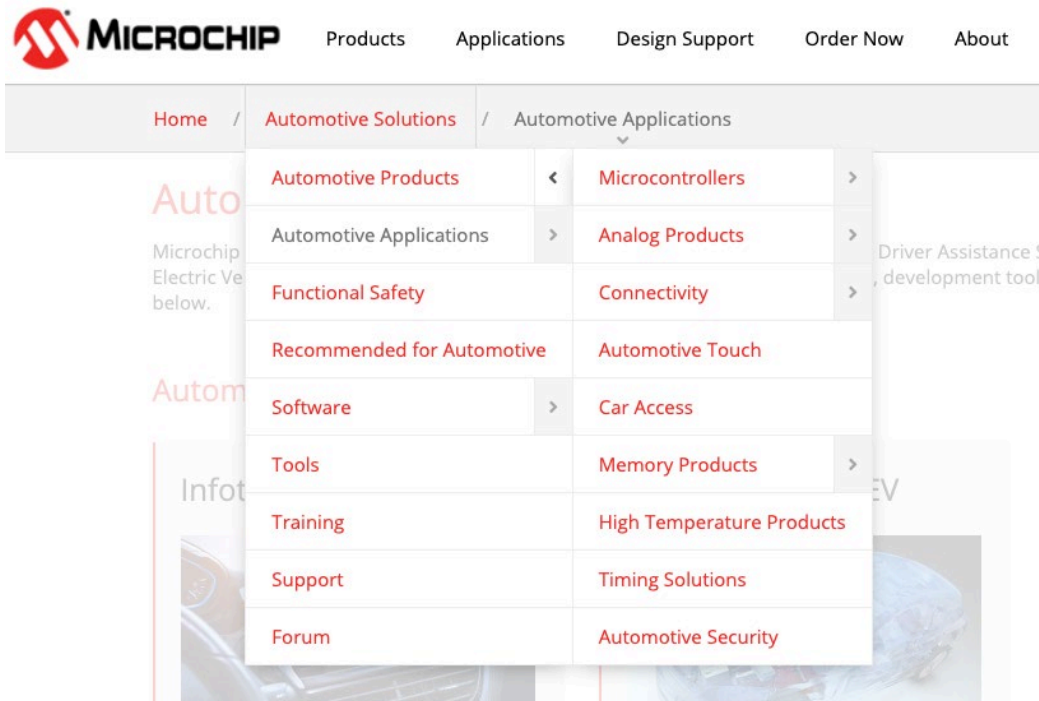
See, *e.g.*, <https://www.microchip.com/design-centers/amplifiers-linear/comparators> (last visited Feb. 10, 2020).

See also MCHP-CADD0\_0000935:

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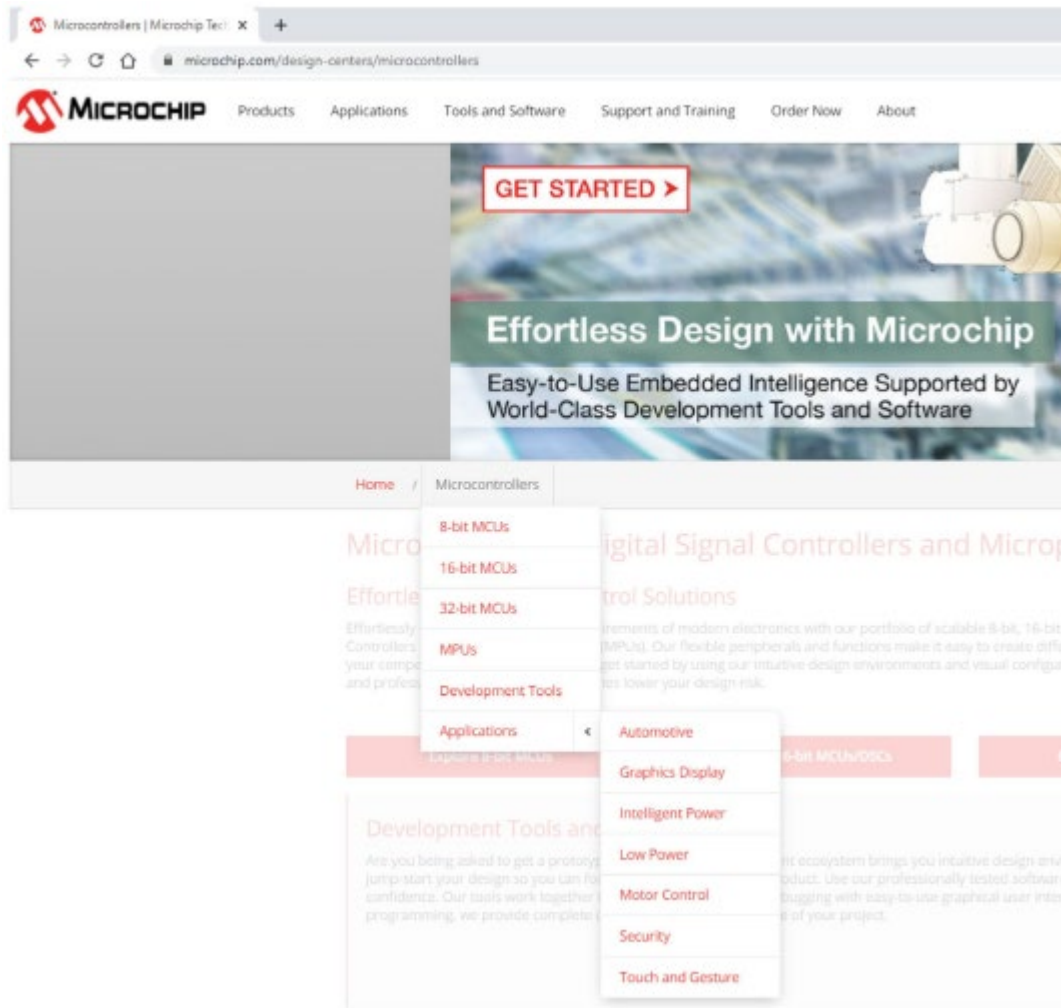
As another example, each active link in the '301 Accused Instrumentalities enables the user to directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items without affecting the sequence of links dynamically created as a menu item is navigated (e.g., the '301 Accused Instrumentalities enable the user to directly browse all items under "Automotive Solutions" such as "Automotive Products," including all hierarchically subordinate items such as "Microcontrollers," "Analog Products," "Connectivity," "Automotive Touch," "Car Access," "memory Products," "High Temperature Products," "Timing Solutions," and "Automotive Security" without affecting the sequence of links (e.g., without affecting the links in "Home / Automotive Solutions / Automotive Applications") dynamically created as a menu item is navigated) as shown below:



See, e.g., <https://www.microchip.com/design-centers/automotive-solutions> (last visited Feb. 10, 2020).

See also:

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See MCHP-CADDO-0000931.

As another example, each active link in the '301 Accused Instrumentalities enabling the user to directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items without affecting the sequence of links dynamically created as a menu item is navigated (*e.g.*, the '301 Accused Instrumentalities enable the user to directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items in the path “Products / Microcontrollers and Microprocessors / 8-bit MCUs / AVR® MCUs” without affecting the a sequence of links dynamically created as a menu item is navigated “Products / Microcontrollers and Microprocessors”) as shown below:



Complete your designs faster with AVR® microcontrollers (MCUs). Offering unsurpassed performance, power efficiency and flexibility, they are an excellent choice for a variety of embedded system designs. Their combination of easily customizable peripherals and the industry's most code-efficient architecture enable you to


See <https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors/8-bit-mcus/avr-mcus/avr-da> (last visited Jun. 7, 2021).

For example, the user can directly browse all items on any given level of the hierarchical information structure including all hierarchically subordinate items in the path “Products / Microcontrollers and Microprocessors” such as “Product Categories,” “Development Tools,” “Software Solutions,” “Application Design Centers,” and “Product Selections” without affecting the path “Products / Microcontrollers and Microprocessors” (*e.g.*, the user can browse items under “Product Categories,” “Development Tools,” “Software Solutions,” “Application Design Centers,” or “Product Selections” without affecting the path “Products / Microcontrollers and Microprocessors.”).

As another example, each active link in the '301 Accused Instrumentalities enables the user to directly browse all items on any given level of the hierarchical information structure (*e.g.*, all items under “Products / Microcontrollers and Microprocessors”) including all hierarchically subordinate items (*e.g.*, browsing “Development tools” allows browsing of subordinate items such as products

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	associated with “Part Number: DM164136” or “Part Number: DM330028”) without affecting the sequence of links dynamically created as a menu item is navigated as shown below:
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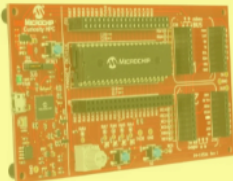

ProductsSolutionsTools and SoftwareSupportEducationAboutOrder Now

QUserShopping Cart

Products / Microcontrollers and Microprocessors

Product CategoriesDevelopment ToolsSoftware SolutionsApplication Design CentersProduct Selections

Featured Development Tools

Development Board	Description
<div><div><div>Curiosity High Pin Count (HPC) Development Board</div><div>Part Number: DM164136</div><div></div><div>Learn More</div></div></div> <div><p>The Curiosity High Pin Count (HPC) Development Board (DM164136) supports a wide variety of 8-bit MCUs. Curiosity Development Boards are cost-effective, fully-integrated MCU development platforms. The development board includes an integrated programmer/debugger and requires no additional hardware to get started.</p></div>	
<div><div><div>dsPIC33CH Curiosity Development Board</div><div>Part Number: DM330028</div><div></div></div></div> <div><p>Evaluate the dual-core dsPIC33CH family using this low-cost board with a configurable power supply load step transient generator. Or customize the board for your application using the two mikroBUS™ interfaces for adding a large variety of click Boards.</p></div>	

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	<i>See</i> <a href="https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors#Development%20Tools">https://www.microchip.com/en-us/products/microcontrollers-and-microprocessors#Development%20Tools</a> (last accessed Jun. 8, 2021).
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